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ORIGINAL ARTICLES.

SYNOPSIS OF THE SECOND HUNDRED CASES OF STRICTURE OF THE URETHRA TREATED BY ELECTROLYSIS. WITH CASES.

Read in the Section on Surgery, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

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OF NEW YORK.

(*Concluded from page 393.*)

The previous statistics, showing certain points, do not give the history, details and progress of the treatment, which are necessary for a thorough understanding. To supply this want I will conclude with a record of cases, partly condensed and partly *in extenso*. While space does not permit details of all the 100 cases, typical cases will be given to represent groups.

Group I.—Strictures complicated with urethral granulations or ulcers; use of the endoscope. No. 104. E. S., Newark, N. J., æt. 25 years. Stricture of urethra; granular urethritis. June 26, 1882. Has had gonorrhœa once, 3 years ago. Was cured of it in 2 months. Noticed a stricture 8 months ago. A gleety discharge commenced a few months before the stricture was noticed. At present the stream is small, corkscrewed and of less power than formerly. Examination with *bougie à boule* finds the walls of the urethra thickened by hypertrophy; there is no increased sensitiveness. There are two strictures, respectively 3½ and 7 inches from the meatus. The size of the strictures was No. 20.

June 30. Endoscope shows a large granulation at 6¼ inches from the meatus, which spot was touched with a solution of nitrate of silver. A few spots in front are of little importance.

July 8. Endoscope. A weaker solution of nitrate of silver was applied to different places, where granulations and indurations were seen. The parts are improved.

July 14. Iodoform was applied through the endoscope.

July 17. Electrolysis. Electrode No. 34 French, bulb egg-shaped. Current of 5 milliampères was used for 5 minutes. The electrode passed the strictures easily.

July 27. Endoscope used, and affected parts painted with a brush with a weak solution of nitrate of silver.

July 31. Endoscope. Mucous lining red and congested. At 6¼ in. a few spots covered with pus are touched with the solution.

August 7. Endoscope shows improvement, mucous lining has a more natural color, is not congested, and granulations have disappeared.

August 31, Oct. 10, and Nov. 14. Electrolysis was used so that a No. 27 French passed very easily. Has been under observation 3 years, and was reëxamined August 25, 1885.

No. 129.—Stricture; Granular Urethritis; Endoscope.—H. A. R., æt. 52, N. Y., widower. When 20 years old had a urethritis, which was not thoroughly cured. 14 years ago stricture was noticed and treated by gradual dilation. At present complains of gleety discharges, soreness in the urethra and a diminished stream on micturition. Sometimes has spermatorrhœa with stools. Bowels are regular and general condition is good.

Sept. 19, 1883. Examination with the *bougie à boule* revealed three strictures at 1, 3 and 5 inches from meatus, which a No. 14 French would pass. The walls of the urethra are thickened and sore on touch. The urethra is very sensitive, and bleeds at a touch. The electrolytic treatment was preceded by mild injections and the use of Mitchell's gelatine urethral bougies, to mitigate the sensitiveness.

Oct. 4. Electrolysis with a No. 17 French, egg-shaped bulb. Negative pole to stricture, which passed all strictures in 6 minutes; 4 milliampères were used, 11 gelatine bougies have been used, and urethra is no longer sensitive.

Oct. 10. Electrolysis. No 20 French passed easily through all the strictures; there is still some soreness.

Oct. 20. Electrolysis; No. 21 passed easily.

Oct. 29. Endoscope showed an engorged state of the mucous lining throughout the urethra, and granulations. Mitchell's urethral bougies continued.

Nov. 5. Endoscope, large tube (easy), showed improvement; granulations treated locally through the endoscope.

Nov. 12. Electrolysis with No. 23 French, 11 minutes, 3½ milliampères.

Dec. 3. Electrolysis, No. 22 French, easy, 8 minutes, 3 milliampères.

Jan. 5, 1884. Endoscope. Granulations at 5½ in. from the meatus were touched with the solution.

Jan. 10. Endoscopic applications were repeated.

Jan. 18. A No. 26 French steel sound passed easily by its own weight, while a current of 2½ milliampères was used, and did not cause the slightest

irritation. Two years afterwards reëxamined; found healthy and without any relapse.

No. 180.—W. A. A., æt. 26, New London. Had gonorrhœa 3 years ago; was treated by too strong injections. Subsequently a stricture was observed and treated by gradual dilation, then by electrolysis. Next went to Dr. Nelson, of New London, who kindly referred the patient to me.

Feb. 24, 1886. Examination. Active inflammation has continued with constant discharge, and profuse bleeding on the slightest touch. Painful erections during the night. At 1½ in. was a slight stricture; at 4½ in. a denuded surface, bleeding on touch, and at 5 in. was another stricture which a No. 20 French will not pass. Weak injections are recommended, and later Mitchell's urethral bougies.

During the month of April electrolysis was used, and gradually the calibre of the urethra was enlarged from No. 18 to No. 28 in 4 séances.

May 14. Electrolysis with a No. 28, which was almost too large to enter the normal meatus.

May 30. Endoscope showed a denuded surface of the mucous lining at 4½ in., where it was treated by local applications.

June. Well. One year's observation, when his family physician reported him well.

Group II.—Complications with retention, spasm of the bladder, prostatic residue, and over-distension of bladder. No. 167. Dr. G. S. M., æt. 49, widower, Conn. For a number of years has suffered from gleet, chronic prostatitis and cystitis; has had constant irritation and frequent micturition. There is a discharge from the urethra, and for the last 8 years has suffered from a stricture.

Sept. 17, 1885. The stricture is at 2½ in. from the meatus; the walls of the urethra are indurated, giving a paper like touch in transmitting the instrument. There are spasms of the bladder and sensitiveness, particularly in the prostatic region. The stricture scarcely admits a No. 20 bougie. Electrolysis with a No. 23 French, acorn bulb, straight electrode, 3 milliampères, 7 minutes, passed the stricture easily.

Sept. 27. Electrolysis, No. 25 French, acorn bulb, straight. This No. 25 is as large as the meatus will admit. The prostate is improved, there is still a little discharge, but the stricture appears to be cured.

Oct. 11 and 25. Two more séances of electrolysis with Nos. 25 and 26 respectively. The meatus was rather contracted, and had to be stretched to admit the instrument, but it was done with patience, time, and without porotomy. The urethra was capacious and the electrode passed easily.

Jan., 1886. Patient was married last December, and writes that he is perfectly well; prostate is not sensitive, has diminished in size, and there is no trouble since his marriage. Remains well after one year's observation.

No. 169.—Prostatitis. Multiple and Impassable Strictures. Retention and Spasm.—J. B. S., æt. 50, New York City, married. Has been troubled with strictures for 6 years; has been treated by dilatation, once urethrotomy was performed; all without relief. Has no urethral discharge, but catarrh of the bladder with violent contraction; at times retention. The stream is very small, most of the time the urine dribbles away by overflow of an over-distended bladder. About 20 years ago had a series of attacks of gonorrhœa; after one there was continuous discharge for 1 year. For the last 3 weeks his family physician has tried daily to introduce instruments into his urethra, sometimes manipulating for 2 hours at a time. At last was unable to pass any instrument; offered patient an introduction to a surgeon, saying perineal section was the only means of relief. In this state patient came to me, Oct. 30, 1885, in great agony, with spasm of the bladder and complete retention.

On examination with *bougie à boule* found strictures everywhere throughout the urethra; there were 6 distinct strictures from 1½ to 8 in. from meatus. Up to 5 in. a No. 17 French could be introduced, but beyond that, the strictures were impassable. Another complication was an enlarged prostate, which pressed at the neck of the bladder against the urethra and prevented the outlet of urine.

Electrolysis with the combination electrode catheter. It was very difficult to introduce any instrument into his irritable urethra, which had been wounded by former injudicious manipulations, and bled at touch. However, I succeeded with a filiform guide, which passed into the bladder. An electrode combination catheter, No. 29 French, tunnelled at the end, was then passed over the guide by electrolysis. In 12 minutes the electrode had passed all strictures and entered the bladder. An electric current of 3½ milliampères was used. The guide was withdrawn, as well as the silver stiletto, and a quart of urine drawn off. The spasm of the bladder ceased, and patient felt comfortable at once.

Nov. 1. Has micturated in a small stream voluntarily about every 3 hours; has no pain, soreness is less.

Nov. 2. Came to the office nervous and in distress, with spasm of the bladder, fearing another attack of retention. The lower strictures are very tight, and will scarcely admit a filiform guide, which is frequently arrested by the lacunæ. The whole urethra is tender and sore from former injudicious catheterization by the family physician. Electrolysis. Tunnelled electrode, No. 11 French, egg-shaped, over a filiform guide; 3 milliampères for 15 minutes passed all strictures with difficulty. The treatment by electrolysis was continued for 3½ months, in which, altogether, 9 séances were held, and the strictures enlarged from 0 to No. 25 French. It was difficult to manage the case, as the cystitis, enlarged prostate and mutilated urethra made complications which needed extra care and separate treatment, at the same time. The cicatrix left from the former urethrotomy was more difficult of absorption than any other of the other ordinary strictures. Hæmorrhagic points of the urethra and the enlarged prostate were successfully treated with galvano-cautery. At this time the patient felt so well that he neglected treatment and made a trip South while he was not considered cured, and was warned not to neglect treatment.

March, 1887. During a year's absence patient has felt well, and not suffered at all; and appears now from fear of a relapse. Examination showed that some places in the urethra were sore, bleeding at touch, and liable to contract. As patient had not been dismissed as cured, such condition was anticipated. For several months he was treated again by electrolysis and galvano-cautery; is so much improved that a sound No. 25 passed easily into the bladder. He is considered well, but remains under observation.

No. 177.—Stricture; Enlarged Prostate; Cystitis; Retention.—T. D., æt. 56, N. Y., married. Jan. 22, 1886, was sent to me by Dr. C. S. Wood. Has had stricture for 26 years. In 1860 a doctor caused him agonizing pains by using a strong injection, which appears to be the cause of his stricture. Has been treated by dilatation off and on. Of late has had spasm of the bladder and distension, so that he could not void urine voluntarily. The urine dribbled away by overflow and most of the time he had to use a catheter. The stricture closed up more and more till he could neither pass a catheter or void urine. On examination three strictures were found at 3½, 6½ and 7½ in. respectively, from the meatus. The last two were impassable. With difficulty a filiform guide was introduced. Electrolysis, No. 9 French, tunnelled, with catheter combination over guide passed all strictures.

Jan. 27. Electrolysis was repeated with a No. 11 French tunnelled over a filiform guide (5 milliampères 10 minutes). In the evening came to the house in distress, with retention, was not able to pass water. A syphon arrangement was made and urine drawn off drop by drop. In this manner 1½ pints of muddy urine evacuated, which was putrid and loaded with pus.

Jan. 28. At 10 A.M. had not been able to pass any water. The bladder had been distended to such an extent that it had lost its contractile power. A small catheter was passed, and assisting with syphon at intervals, during 1½ hours 53 ounces of urine were emptied from the bladder. This urine was thick, putrid with solid masses of disorganized stinking pus. At 6 P.M. bladder will not act; flexible catheter will not pass. A small silver catheter was introduced on a guide and 24 ounces of water drawn off, which had a better color, was clearer and contained little pus.

Jan. 29. Faradization of bladder, after which he could pass water. While a guide was in the urethra 20 ounces passed. Bladder washed out, the urine is improved.

Jan. 30. Micturition voluntarily.

Feb. 1. Electrolysis No. 14 French, egg-shaped, tunnelled over guide, 4 milliampères 7 minutes.

Feb. 3. Bladder washed out and dilated.

Feb. 5. Electrolysis No. 17 French, egg-shaped bulb, tunnelled over guide, after which he passed a better stream. The treatment by electrolysis and washing out the bladder was continued in the same manner till July. Then a No. 23 French sound passed easily into the bladder and patient felt well, having regained full power of his bladder. After 1 year patient is entirely well, and objects to further treatment as he is perfectly satisfied with his present condition.

Group III. Strictures caused by traumatisation; some accompanied by perineal fistula. No. 140. Dr. W. T., æt. 39, New York, April 1, 1884. Has had urethritis, and a stricture of 9 years standing. By an accident, a ragged instrument cut the urethra in the prostatic portion, partly in the neck of the bladder. This was not healed and a constant source of annoyance, causing hæmorrhage at intervals, particularly on passing an instrument. Part of this cut has cicatrized and caused the stricture, the other part remaining as a granulating ulcer. Electrolysis was used by an excellent practitioner, who failed because he used too strong a current, and handled the instruments carelessly. Examination revealed unevenness caused by the traumatisation on the lower side of the urethra, in its depending portion, left side. Electrolysis was used with a No. 25 French egg-shaped bulb, negative pole against the stricture, 5 milliampères for 12 minutes, with decidedly good result. During 6 months of very irregular attendance 10 séances were held with electrolysis. The electrode gradually enlarging until a No. 32 French passed easily into the bladder without causing any pain or hæmorrhage. No. 30 would have been large enough, but No. 32 was used at the special wish of the patient.

1887. The patient has remained well.

No. 179.—Stricture; Perineal fistulæ.—B. U. H., æt. 35, New London, married. Had a stricture for last 6 years, occasioned by an accident to the perineum. A urethral abscess behind the scrotum appeared, which in time broke and established three separate fistulæ, through which matter and urine passed. Had been treated by different physicians. Urethrotomy had been used without benefit. The strictures grew smaller, so that voluntary micturition was difficult and retention prevailed. The bladder was distended and the urine dribbled away from overflow. The constant dribbling of urine and discharge from fistulous openings made it necessary to wear a urinal. Patient failed in every way, and was not able to attend to any business. Then he applied to Dr. A. W. Nelson, a well known, conscientious surgeon of New London, who referred him to my friend Dr. A. T. Douglas, of the same place, to be treated by electrolysis.

Jan., 1886. From this time the patient was treated by Dr. Douglas and myself. There were two distinct strictures at 3½ and 6½ in. respectively, from the meatus, one of which was so small that no instrument would pass. The urethra was irritable, the walls indurated, the fistulæ in the perineum running, and the perineum itself changed to an unrecognizable mass of infiltrated tissues. Dr. Douglas succeeded very well with the electrolytic treatment and enlarged the strictures in a few séances.

Feb. 4. I operated in New London with electrolysis in the presence of Drs. Douglas, Nelson, Bramman and Stanton. The strictures were passed with a No. 25 French, egg-shaped bulb. Soon afterwards the patient felt well and passed voluntarily a good stream of urine.

Feb. 9. Dr. Douglas wrote to me: "H. was here about half an hour ago, and says he has never passed his water so freely as he did Friday and Saturday." Subsequent applications of electrolysis made him a healthy urethra of No. 28 size. The fistulæ all healed spontaneously as soon as the strictures were enlarged.

Feb. 18, 1887. A reëxamination showed that no contractions had taken place. A No. 28 passed easily into the bladder and the patient has enjoyed perfect health and attended to his business.

No. 183.—Four Strictures; Traumatism; Rupture of the Urethra.—H. K., æt. 42, married, New York City. Has had strictures for 18 years, caused by former urethritis and accidents. Has also suffered from cystitis; received a kick in the perineum by an accident. Once he used a sound so forcibly that he ruptured the urethra. Has been treated off and on, mostly by gradual dilatation, without much benefit. He can tolerate the use of instruments well.

April 9, 1886. Examination. *Bougie à boule* meets slight indurations and thickenings of the walls of the urethra, and is arrested at 5½ in. Sound No. 12 will not pass this stricture. A filiform guide passes easily into the bladder, over which a tunnelled sound No. 9 ran tightly. There were four strictures at 4, 5¼, 6¼, and 7¼ in. from the meatus.

April 15. Electrolysis; filiform guide, over which a tunnelled electrode No. 11 French, egg-shaped was used, 4 milliampères for 8 minutes. It passed through all strictures; the hard ring stricture at 6½ in. was overcome by slow manipulations and lowering the curve of the instrument. Dr. Lawson was present.

For 4 months the electrolysis was continued in séances of about 9 days' intervals. The sizes of the electrodes were gradually increased each séance in the following order: No. 14, 27, 18, 20, 23, 25, to 28. Patient was well and at last accounts, was, in 1887, in Arkansas.

In all cases which were complicated with perineal fistulæ, it is a fact that they healed without any special treatment as soon as the strictures were enlarged and a urethral canal established.

Group IV. Strictures impassable.—This group has, in a measure, been anticipated, as it is complication concomitant with other troubles in former cases. A stricture is called impassable when the smallest regular instrument cannot be introduced through the obstruction of the urethra. In these cases the urine may dribble away, and a filiform guide may be introduced.

No. 138.—This is a case belonging partly to the last group, as it was of traumatic origin, besides being impassable. A. N., æt. 48, New York City, has had a stricture for 41 years, occasioned when a boy 7 years old by falling from a hay loft astraddle on an oat bin. The strictures were multiplied by urethritis contracted in later life.

March, 1884. Came under my observation. The urethral canal was so small that the *bougie à boule* or any other regular instrument would not pass further than 2½ in. from the meatus. After some manipulations a filiform guide entered. Electrolysis with a No. 9 French, conical end, tunnelled electrode was used over the guide. A current of 5 milliampères for 9 minutes was successful, and passed two strictures and the spasm into the bladder. There were two strictures at 2½ and 3 in. respectively from the meatus.

After two more successful séances of electrolysis a No. 14 French passed the strictures, when the patient disappeared.

Sept. 5, 1886. Nearly 2½ years later the patient reappears, with the following story. While he was perfectly satisfied with the progress made by electrolysis, he was persuaded to have a cutting operation. He submitted to urethretomy. Six weeks after a sound No. 30 French passed easily, and he was declared cured. 1 year afterwards an eminent surgeon had to make an official report, and he found that the patient had two tight strictures at 2½ and 3 in. from the meatus, proving that urethretomy had been a decided failure, and the gentleman lost his position in consequence. Since then, the strictures have contracted more and the patient comes to-day frightened and begging for electrolysis again. The strictures were found to be contracted to about No. 18 French, and the cicatrices caused by the after-effects of the cutting, so tough that they were calcarious, and yielded very slowly to absorption. The electric séances were recommenced in intervals, and the calibre of the urethra gradually enlarged to a No. 28 French, size. The patient is now well.

May, 1887, was reëxamined with a No. 28, which proves that no relapse has taken place.

No. 168.—Impassable Stricture; Retention.—P. E., æt. 38, New York City, widower. Oct. 11, 1885. Has had gonorrhœa in former years. The stricture was marked two years ago, when the stream became gradually smaller and made micturition very troublesome. At present he cannot pass water at all, and is relieved only by dribblings from the overflow of a distended bladder. No bougie will pass the urethra and the patient is in great distress, having positive retention. A filiform guide made its way with the greatest difficulty; there is really no urethra. Electrolysis. Positive electrode was held in the palm of his hand; the negative pole, a tunnelled electrode with a conical end, No. 9 French size, was passed over the filiform guide, and advanced very slowly but steadily, and finally passed into the bladder. The urine was drawn off; 4 milliampères were used for 6 minutes. In this case it was impossible to state the number of strictures as the whole urethra was a mass of strictures.

Oct. 25. Electrolysis. The filiform guide entered after some time spent in manipulations. No. 11 French, tunnelled, conical end was very tight, and advanced very slowly. The worst point of the stricture is at 6½ in. 10 minutes were occupied with a current of 5 milliampères.

Nov. 2. Electrolysis. No. 18 French, egg-shaped bulb, 3½ milliampères for 11 minutes.

Nov. 10. Electrolysis. No. 18 French, egg-shaped, no guide.

Nov. 18. Electrolysis. No. 20 French, egg-shaped, no guide.

Nov. 30. Electrolysis. No. 23 French, egg-shaped, no guide.

Dec. 4. Electrolysis. No. 25 French, egg-shaped, no guide.

Nov. 1886, 1 year after, was reëxamined with a sound No. 25.

1887. Heard from, is well.

Group V.—Strictures which are complicated with constitutional diseases, as Gout, Rheumatism, Pyelitis, Syphilis, etc.—Typical cases we find in *Nos. 114, 126, 154 and 185* of our statistics. It is scarcely necessary to give these cases in detail. The point is to call attention to the fact, that such diseases aggravate the strictures to the degree of acute inflammation. These inflammations must be subdued before electrolysis is used. Such intercurrent diseases must be treated according to their nature and indications.

Group VI.—Regular cases of Stricture, (single or multiple.)—These are typical cases as they occur most frequently, and appear oftenest before the general practitioner. One case will suffice to show, as a general rule, the treatment.

Case No. 148.—J. W., æt. 32, married, New York city. July 28, 1884. Twelve years ago contracted venereal; had urethritis, chanchroids and bubo; the latter was lanced. Two years ago had another urethritis, which ran into gleet, and is still present. Every morning the meatus sticks together with a film, which when broken, lets out two drops which are almost transparent white and sticky. The stream of water has grown smaller, and is now very thin, twisted and without force. Since last year the testicles are swollen.

Examination.—Testicles hang down low, simulating a degree of degeneration, of tuberculosis. Meatus is small. *Bougie à boule* meets with indurated walls throughout the urethra; the touch transmitted by the instrument is like parchment, and in a few spots cartilaginous. The course of the urethra is tortuous. Four strictures are found, in the following places: 1st. stricture is near the meatus; 2d. stricture is 4 inches from the meatus; 3d. stricture is 5 inches from the meatus; 4th. stricture is 6¼ inches from the meatus.

August 3. A filiform guide met with obstacles everywhere, but was finally introduced into the bladder. *Electrolysis.* Positive sponge electrode is held by patient and pressed in the palm of his hand. The negative pole is a No. 14 French electrode, egg-shaped bulb, tunnelled, to run over the guide in the urethra. The current applied was 4 milliampères for 5 minutes. The electrode passed slowly through all the strictures into the bladder. Patient is weak, run down constitutionally and nervous.

August 4. Feels better, has voided urine easier.

August 10. Electrolysis, over guide with tunnelled electrode No. 17 French, egg-shaped bulb; 4½ milliampéres, 11 minutes, passed easily through all strictures. While the instrument was in the bladder, some spasm took place.

August 17. Electrolysis, No. 17 French, egg-shaped, without a guide advanced easily.

August 24. Electrolysis, No. 20 French, passed all strictures: 5 milliampères, 6 minutes.

August 31. Meatus is very small, so that it will not admit of a larger size than No. 20.

Sept. 21. Electrolysis. The meatus is enlarged by an electrical stretcher, which worked so well that a No. 28 could be introduced.

Sept. 28 and Oct. 5. The electrolysis with the meatus stretcher was repeated.

Oct. 12. He is better in every way. Has no gleety discharge. Bougie cannot detect any stricture. Is well.

Oct., 1885. Reëxamined with a No. 28. No relapse. Well.

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UNDUE INFLUENCE IN ITS RELATIONS TO MEDICAL JURISPRUDENCE.

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Read in the Section of Medical Jurisprudence, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

If it had been determined that a paper should be read on the most nebulous subject within the realm of Medical Jurisprudence, perhaps none could have been selected more obscure and undefined, than the one on which I am about to speak.

Undue influence in its medical and legal relations is my theme. This topic has been rendered cloudy by the manner in which the subject has been treated by lawyers and judges, and doctors and authors. It has not been relieved from the clouds of obscurity which surround it, by the learning and research of the judiciary of two continents. There has seemed to be a hesitancy on the part of the bar to give it any settled or uniform definition. That hesitancy has seemed to grow out of the difficulty of finding cases on this subject with uniform characteristics. It is the absence, or imperfection of correct definitions, which tends to trip the feet of students and philosophers all along their journey through life while in search for truth. Whoever shall give a *perfect* definition to Medicine or Law, to Science or its attributes, or to Nature, that Omnipresent Power, that surrounds us all, will be wiser than any being that has yet been born.

Very few of the elementary writers have attempted to define this subject. There are many difficulties that will confront any one who attempts to give it a satisfactory definition. The judges who have had occasion to adjudicate upon it, generally have discussed the facts in each case as they arose; and when finding the subject matter tainted with undue influence, have pronounced judgment against it on the ground of fraud *and* undue influence. Such a judgment is a misnomer—it it is an incorrect use of terms. It is as absurd to say that an instrument is void for fraud and undue influence, as it would be to say that it is void by reason of a *fraudulent fraud.*

Undue influence has its origin in fraud. It is in and of itself a fraud. But this infirmity of man, wherein fraud is born, with which courts have so much to do, has in its ramifications an extensive nomenclature. It frequently amounts to crime, and is punished as such under different names.

Fraud has been defined by writers of great authority and antiquity to be; any cunning, deception, or artifice used to circumvent, cheat, or deceive another. Such are called actual frauds. "But this definition," says Judge Story, "can hardly be said to include that large class of implied or constructive frauds which are within the remedial jurisdiction of courts of equity."

Fraud, in the sense of a court of equity, properly includes all acts, omissions, and concealments which involve a breach of legal or equitable duty, trust, or confidence justly reposed, and are injurious to another, or by which an undue and unconscientious advantage is taken of another. All writers admit the difficulty of giving it a definition. The student will find an interesting discussion of the different species of fraud in the opinion of Lord Hardwicke, in the case of Chesterfield vs. Janssen, 2 Vesey, 125.

Courts have to deal with a variety of frauds—actual frauds, positive frauds, frauds in fact, and constructive frauds; false promises, lies, circumventions, threats, duress, deceits, and undue influence. They are assigned for punishment or correction, by the wisdom of our fathers and by common consent, according to the degree of their wickedness, or the web of their complications, to different tribunals—to criminal courts, courts of law, courts of equity and probate courts. But lamentable to be said, there is an infinite number of lies, false promises, deceits, frauds, and circumventions, for which no human tribunal affords any redress. The purest girl, or it may be, the noblest young man, may by the most artful deceits or blistering lies, covering even a character of infamy, be induced to make the most solemn contract on earth—the contract of marriage; and yet courts give no redress.

If all false promises and deceits should be made the subject of judicial investigation, the world itself would not contain all the books which might be written. Science and civilization in their march toward empire, have built that beautiful structure of jurisprudence, dual in its form, to one of which we give the name of common law; to the other, equity. Experience has drawn the line beyond which neither is expected to go. There are falsehoods, lies, deceits, backbitings, scandals, oppressions, and wrongs that no man can number, which courts cannot attempt to redress or correct. Such are remitted for correction to the forum of conscience, the influence of society, or the scorn of man. But we have on this occasion more particularly to deal with undue influence. He who criticises the definitions of others is in duty bound to give one for himself. Hence, I have had the boldness to offer a definition.

Undue influence, as affecting contracts or wills, may be defined to consist of that *fraudulent persuasion* or *oppressive and irresistible importunity*, or *adroit deceit* imposed upon a *mind impaired by disease or infirmity*, which induces the making of a *testamentary instrument* or a *contract* which would not have been made had the *mind been free*, and in *its normal condition*. He, who would have the temerity to attempt to exhaust this theme, must enter upon a field as boundless as the domain of man's cunning and ingenuity, and must explore depths as profound as the fathomless abyss of human depravity.

From the definition I have given, it will be perceived that the persuasion necessary to amount to undue influence must be fraudulent. Because reasonable persuasion, even great importunity, has been held to be permissible, when honestly made, to change a will when the decedent was of sound mind and memory. Then again the importunity must be *irresistible*, that is to say the mind of the testator must be so weakened by disease, or by senile dementia, or the infirmities of age, or so overpowered by some terror or external force, as to submit his will to the dominion and control of another.

But it may be asked, "Cannot the wills of persons in perfect health and of sound mind be set aside?" Certainly; but not for *undue influence*. Suppose a person is called upon to draw a will or a codicil, and it is read to the testator, and approved, and then taken away to be engrossed, and while being engrossed is materially altered, and when returned, the decedent inquires: "Is the engrossed paper the same as the one which I approved?" He is answered, "Yes." He signs it. Now, such a will may be set aside; not on the ground of undue influence, but for positive fraud; and precisely the same rules of evidence would apply in that case, as would be required to set aside a deed or a contract in like case *inter vivos*. But in a multitude of cases, as I shall attempt to show, the burden of proof is entirely different in cases of undue influence affecting contracts, *inter vivos*, from that affecting wills. But I will refer to definitions as given by others, with some of which I agree, and as to the others I dissent.

The Lord Chancellor of England, Lord Cranworth, in the case of Boyse vs. Roosborough, decided in 1859 in the House of Lords, reported in the sixth volume of the House of Lords reports for the years from 1857 to 1859, defines undue influence to be "coercion or fraud." I deem such a definition, with all due respect to the Lord Chancellor, a very imperfect one.

In the case of Deitrich vs. Deitrich, 5 Sargent & Rawle, the court holds that "any important abuse of the testator's confidence, by making him believe unfounded imputations against those entitled to his bounty, if done understandingly is held fraudulent, and comes under the designation of undue influence." This definition is defective. See Small vs. Allen; 8 Term Reports, 147. Clark vs. Fisher, 1 Paige, 171.

In the case of Hall vs. Hall, 1 E. L. and Eq., Pr. & Div., the court says: "Importunity, or force such as the testator has not the force or courage to resist; moral command asserted and yielded to for the sake of peace and quiet, or of escaping from distress of mind or social discomfort, these, if carried to a degree in which the free play of the testator's judgment, discretion, or interest is overborne, will constitute undue influence, although no force is either used or threatened."

In Darley vs. Darly, 3 Bradford, 481, a codicil was rejected on the ground that it was obtained by undue influence. The instructions for drawing the

codicil were given by decedent. On this subject Surrogate Bradford says: "What is undue influence, and what degree of it requires to be exercised in order to have the act improperly procured judicially avoided, depends more upon the peculiar circumstances of each individual case than upon any abstract, theoretical reasoning. I am not at all inclined to yield to the view that it must amount to actual duress in order to be unlawful, nor does there seem to be any strict analogy between the two cases. Duress may be exercised when the will has a present, independent power, and the man is conscious of it, but is compelled against his will. The force taken away, the pressure removed, he immediately asserts his independence. This is compulsion and violence—moral or physical. There is a species of undue influence which resembles duress in its external action, and by its importunities compels an act against the real secret wish of the subject. But its most usual manner of approach and of action is more stealthy and subtle. It saps and undermines the will itself, obtaining, as it were, a foothold within, and shaping and molding the desires so that there no longer remains any wish to resist or power to withstand its suggestions. This kind of influence is by far the most dangerous, from the fact that its movements are often quiet and noiseless, and its effects are hidden in the apparent volition of its subject. And yet this cannot be called duress. The stronger will frequently acquires an extraordinary power over the weaker, not by mere dint of importunity, by threat or force, but by that steady persistence, that unrelenting pursuit of its purpose which wear away less stubborn determinations; or, again, by artfully taking advantage of the play of emotions and passions, appealing to prejudices, flattering weaknesses, and fomenting quarrels. A dominion thus acquired, if employed to effect a testamentary act, may be just as potent, distinct, and positive in the results as if coercion had been used; and I cannot perceive why it should not be viewed in the same light, and receive the same treatment at the hands of the court as palpable duress.

"It is again said in 1 Jarman Wills, page 29: 'That in proportion as the infirmities of the testator exposes him to deception, it becomes imperatively the duty, and should be anxiously the care of all persons assisting in the testamentary transaction, to be prepared with the clearest proof that no imposition has been practiced, but that the testator did in fact fully understand every portion of the paper which he executed as his will.' In Weir vs. Fitzgerald, 2 Bradf. Sur. R., 42, the learned Surrogate says: 'Something more is necessary to establish the validity as the will in cases where, from infirmities of the testator, his impaired capacity, or the circumstances attending the transaction, the usual inference cannot be drawn from the mere formal execution; additional evidence is therefore required that the testator's mind accompanied the will; that he knew what he was executing, and was cognizant of the provisions of the will.'

"But the influence exercised over a testator which the law regards as undue or illegal, must be such as to destroy his free agency; but no matter how little the influence, if the free agency is destroyed it vitiates the act which is the result of it. In 1 Jarman on Wills, 36, it is said: 'That the amount of undue influence which will be sufficient to invalidate a will must, of course, vary with the strength or weakness of the mind of the testator; and the influence which would subdue and control a mind naturally weak, or one which had become impaired by age, sickness, disease, intemperance or any other cause, might have no effect to overcome or mislead a mind naturally strong and unimpaired.'"

"The undue influence is not often the subject of direct proof. It can be shown by all the facts and circumstances surrounding the testator, the nature of the will, his family relations, the condition of his health and mind, his dependency upon the subjection to the control of the person supposed to have wielded the influences, the opportunity and disposition of the person to wield it, and the acts and declarations of such person [Marvin vs. Marvin, 3 Abb.; Ct. of App.; Cas. 192; Reynolds vs. Root, 62 Barb.; 250 Tyler vs. Gardiner, 35 N. Y. 559; Foreman vs. Smith, 7 Lans., 443; Lee vs. Dill, 11 Abb.; Pr. R., 214; Dean vs. Negley, 41 Penn. 312]."

In determining the question of the validity of a will, the first matter to be considered is: Was the alleged testator at the time of its execution a person of sound mind, and if he was, then, secondly; Was the instrument, in question, the expression of his genuine will, or was it the expression of a will created in his mind by coercion or fraud?

In the case of a raving lunatic, or of a simple idiot, there is no difficulty in saying that neither is capable of disposing of his property; but between such an extreme case and that of a man of perfectly sound and vigorous understanding there is every shade of intellect, every degree of mental capacity. "There is no possibility of mistaking midnight for noon, but at what precise moment twilight becomes darkness, is hard to determine."

The Lord Chancellor, in the case above referred to in the House of Lords, in 1859, says: "In order to determine that a will has been obtained by coercion, it is not necessary to establish that actual violence has been used or even threatened." The conduct of a person in vigorous health towards one feeble in body, although not unsound in mind, may be such as to excite terror and make him execute as his will an instrument which, if he had been free from such influence, he would not have executed.

But a different rule prevails in respect to the burden of proof as to gifts and contracts *inter vivos*, from that which applies to wills.

In the case of Paifitt vs. Lawless, reported in the fourth volume of "English Reports" as edited by Mr. Moak, of Albany, the true doctrine is, that undue influence cannot be presumed. The party alleging it must prove it. In that case Lord Penzance says: "In equity, persons standing in certain relations to each other, such as parent and child, man and wife, doctor and patient, attorney and client, guardian and ward, are subject to certain presumptions when transactions between them are brought in

question. And if a gift or contract made in favor of him who holds the position of influence is challenged or impeached by him who is subject to that influence, the courts of equity cast on the former the *onus probandi* of proving that the transaction was fairly conducted as if between strangers; that the weaker was not unduly impressed by the natural influence of the stronger, or the inexperienced overreached by him of more mature intelligence." See the very interesting case of Haydock vs. Haydock, 33 New Jersey Equity, where an excellent definition of undue influence is given.

In the case of gifts or other transactions *inter vivos* among the above named class of persons, it is considered by courts of equity that the natural influence which such relations as those in question involve, exerted by those who possess it to gain a benefit for themselves, is an undue influence.

From the foregoing definitions and illustrations we may deduce the following rules. In order to set aside the will or deed, or contract of a person, by reason of undue influence, we must have:

1. A subject whose mind is impaired by disease or infirmity.

2. There must be fraudulent persuasion or irresistible importunity.

3. The subject must be fraudulently induced to do that which he would not do if left free and in his normal condition.

When these concur we have *undue influence*; but when a man in the free and healthy possession of his powers is induced by trick, deceit, cunning or circumventions to execute a deed, a will, or make a contract, unjust to himself and others, such cases are denominated *actual frauds*, and redress should be given in the courts under that characterization. With these general principles and definitions before us, we become interested in the examination of actual cases which may tend to their illustration.

It was my purpose at the commencement of the preparation of this paper, to give some of the prominent facts relating to a large number of leading cases in this country and in England. The limits prescribed to the reading of a paper here, will only give me time to briefly allude to a few in this country in addition to those already cited.

Higgins vs. Higgins is an interesting case. It was tried in the City of New York in the Supreme Court, and was reported at length in the papers at the time. It was never taken to the Court of Appeals, and hence does not appear in the reports of that Court. The plaintiff, George Higgins, had been for over 25 years the chief bookkeeper, cashier, and confidant of the eminent merchant, the late A. T. Stewart. He had a large salary, and by his frugal habits, economy and careful investments, was accumulating a handsome property, when he met at a boarding house a strange woman—a gay, gushing "grass-widow," who induced him to marry her, without making any inquiry into her antecedants. They lived comparatively happy for a year or two, when by reason of close confinement to his desk, for 16 hours out of 24, under severe mental strain, while cohabiting with such a woman his health began to fail. He was treated for impotency and began to show premonitory symptoms of multiple sclerosis. As his will power began to fail him, his wife commenced her importunities to induce him to transfer all his property to her. In a short time that was accomplished. His health failed to such an extent that soon after Mr. Stewart's death Judge Hilton, Stewart's successor, retired him from duty, on a salary in the nature of a pension, for a time.

Mr. Stewart in his will had made a bequest to Higgins of $10,000, using these words in the will to-wit: that the money was given "in remembrance for long and faithful service." The legacy was paid to Higgins immediately after the proof of Mr. Stewart's will, and in less than three days his wife induced him to transfer the check for the ten thousand dollars to her, which she immediately invested in real estate, taking the deed in her own name. She became so bold in her iniquity, that she conceived the idea of getting rid of her husband by putting him into an insane asylum. She went to the authorities and represented that her husband was a pauper and was insane, and by the help of a wicked pliable doctor placed him in the pauper department of the violently insane, at Bellevue Hospital, where he remained among the worst of the lunatics for two or three days. The authorities finding him a broken down, harmless man, far from being a lunatic, set him at liberty. She then conceived the idea of inducing him to commit suicide. She told him that the money was all gone, and that she should put him into the Poor-house, besides she said that her friends had told her that Stewart's executor was about to arrest him for embezzlement. That the best way for him to do was to take a large dose of morphine—that he would go to sleep and never wake up—that would be the end of him—that there was no hereafter. The dread of being placed in a poor-house preyed upon him. He had sense enough to disbelieve the story of his proposed arrest, but he went out and bought the morphine. On his way home his Roman Catholic teachings as to the sin of suicide, came to his mind. He refused to take the nap, which his kind wife had advised. She then told him that as he had an acquaintance in Chicago, she would pay his fare to that city.

She took him to the depot, bought a ticket, fastened it to him as a tag, as one would to a dog, for transportation. She put two dollars in his pocket to pay his expenses on the way. He arrived in Chicago and found kind friends, by whom he was so kindly and tenderly nursed that in a few weeks he was able to return to New York in much better health. He at once commenced a suit against his wife to recover his property, on the ground of circumvention and undue influence. On the trial, which lasted about seven days, it was proven that at the time he was married, he was led into the snare of marrying a woman who had a husband living, that she had been engaged in keeping a policy shop, which fact had been adroitly concealed from him.

Expert alienists were put upon the stand to show the mental condition of Higgins at the time he made the transfer of his property to his wife. Several medical witnesses, among them one of our leading

alienists, an author of a recognized treatise on insanity and known to all of you as an original investigator in the anatomy and pathology of the nervous system, who to-day honors us with his presence, testified to the mental condition of the plaintiff, demonstrating that his infirmities were such, and his mental impairment so great, that he could very easily be made a prey of undue influence. The court made a decree restoring all the property in question to the plaintiff, on the ground that it had been fraudulently obtained from him by *undue influence.*

An interesting case was tried last year in Chenango County, N. Y. The will and codicils thereto of Asa R. Foster were contested. In every case that I have found in this country, except this, the party exercising the undue influence has had some pecuniary interest or gain to accomplish as the reward for his iniquity. But in this case he would not be benefited in the least by the change he was seeking to make in the decedent's will. He had a spite against some of the relatives of the testator who had been provided for in the will, and he set about the work of having a new will made, and having the persons whom he disliked deprived of any part of the estate, merely to gratify his malice. He accomplished his purpose, but the will was set aside on the ground of undue influence. James W. Glover, Esq., of Oxford, N. Y., was the counsel for the contestants in the case.

Perhaps the Hancock case, reported in 22 Hun., 38, contains as many interesting points on the subject of undue influence as any other reported case. For instances of adroit cunning and audacious villainy it transcends any case within the history of the jurisprudence of this country. It cannot be analyzed in one short hour. It occupied over four years in taking testimony, at intervals, in the Probate Court. I can only call attention briefly to a small number of its peculiar features.

For the better understanding of the case a biographical sketch of decedent will be proper. Hancock was born in England about 84 years ago. He left no widow or children. In person he was about 5 feet 8 inches in height, of heavy form, rather large neck, and florid complexion. He was a moral and very polite man, but of an irritable and impetuous temper, hasty in his conclusions, and sometimes uncharitable in his judgment of men. He was very upright in his dealings, full of sympathy for the poor and oppressed, and abounding in benevolence. In 1850 he was engaged in the hosiery business in the city of New York in company with Mr. C. M. Carpenter. He continued in business for 19 years, and amassed a fortune of over $200,000. During all these years, and until he became demented, a very warm personal attachment existed between himself and Mr. Carpenter, so much so that he never engaged in any important business transaction without first consulting him. He frequently said that he was under more obligation to Mr. Carpenter for his fortune than any other person living. In 1869 he made a will, appointing Mr. Carpenter one of his executors, making a large bequest to him and his family, and vesting in him important trusts.

While he was accumulating his fortune he made his home with Mrs. Thatcher, a kind, genial, and most estimable widow lady, who was then keeping house in Brooklyn. She having removed to Orange, N. J., he went there to reside with her, and to make that his home; her son, until his premature death, being one of his favorite employés; her daughters nursing and watching him in his sickness with filial care and tenderness, and their mother sparing neither care, nor time, nor toil nor expense, in making him such a home as his circumstances would suggest while in active business pursuits, and such an asylum as his infirmities seemed to require in his declining years. He spoke of her home as his home, and of her daughters with a tenderness akin to parental affection. That lady and her daughters he liberally provided for in a will of 1869, and another will of 1874. He increased the amount to Mrs. Thatcher in the will of 1874. He had a nephew whom he had educated, who had entered one of the learned professions. That nephew had been abundantly remembered in the will of 1869 and in a will of 1873. He was bequeathed a large sum in the will of 1874, and was made an executor in the will of 1874.

Intermediate the date of the will of 1869 and the will of January, 1874, a number of papers had been drawn at the request of Hancock, designed to be executed by him as his will, in all of which he had made large legacies to Mr. Carpenter, Mrs. Thatcher and her daughters, and to his nephew. Whether those papers were ever executed does not appear. The fact of his friendly regard for all these persons does appear, and continued to be manifested until he became the victim of the frauds hereafter mentioned. His plan for the distribution of his estate was to bestow about one-half upon his kindred, and divide the other half between his personal friends and benevolent societies.

His mind and memory began to fail him soon after the year 1869. In 1874 he was informed by an eminent physician, Dr. Pierson, that a slow paralysis was coming upon him. In February, 1874, he had a severe stroke of paralysis. From that time until his death his mental powers failed to such an extent that at the time the two codicils, dated April 14, 1874, and July 1, 1874, were executed, his testamentary capacity was all gone. The second and third alleged codicils to his will were contested on the ground of fraud, and also undue influence.

In April, 1874, he went to the house of his brother-in-law, at Nanuet, to visit his friends, with the view of returning to his home in Orange. His illness increased. He was induced to remain at Nanuet, where he languished during the summer, and on the 12th day of September, died. How, during that fatal summer, the whole purposes of his life became apparently changed; how the proponent, for whom through life he manifested the greatest aversion, came to be appointed his executor in place of his friend; how all the bequests to Mrs. Thatcher and her daughters, and to Mr. Carpenter, and to his nephew, and to most of the charities, came to be revoked, and how his life-long friendship for Mr. Carpenter and his nephew were turned to hate, and why it was that frauds and

impositions were practiced upon that dying man to such an extent as to deprive him of the ability to make a free and valid disposition of his estate, and why alleged codicils to his will were absolutely void, it becomes interesting to consider.

The line of attack upon the codicils consisted principally of four divisions:

1. To prove his failure of memory.
2. To show the physical infirmities of the decedent.
3. The duress, restraint, and deception to which he was subjected.
4. The actual frauds that were practiced upon him.

1. There were 16 witnesses placed on the stand by the contestants, most of whom had long been acquainted with the decedent, and had many business transactions with him, to testify respecting his memory. They described 49 distinct instances showing defect of mind and memory, aside from the testimony given by the experts. He was proved to be unable to recall places, or remember the locality of his recent familiar resorts. Having bought clothing he would be unable to say the next day how he came by it. He would deny that it belonged to him. Having burned the draft of one of his wills he forgot what became of it, and accused one of his friends of having carried it out of the country.

Having made a codicil to his last will disinheriting a beloved friend, he was asked if such was the fact, and he stoutly denied it, and claimed that the friend was a legatee to a large amount. He would furnish his lawyer with a draft of a will, in his own handwriting, and come the next day with another, and when told that he had furnished one the day before, he would deny it; and on being shown the paper which he had left, would say: "Oh, yes! I had forgotten all about it." This happened on as many as ten or twelve occasions.

He was unable to recall the names of the beneficiaries under his often prepared but unexecuted wills. He was unable to recall to mind the condition of his estate. These are only a few specimens of his failure of memory.

2. His physical infirmities were proven to consist of paralysis under the designation of hemiplegia; also an aggravated form of diabetes mellitus and senile dementia.

Dr. Pierson, of New Jersey, who had been his medical attendant, made a thorough diagnosis of his case. His infirmities were aggravated by the conduct of the proponents during the incubation of the iniquity which resulted in the codicils. They gave him beer in the morning, wine at noon, and brandy at night. Dr. Pierson testified that the mind of the decedent was so impaired as to be unfit to make a valid will. Dr. Charles Corey, who has had much to do with mental disease, testified to the same; also Dr. Dougherty, of New Jersey.

3. The testimony was conclusive that he was restrained by proponents to remain with them away from his home, his confidential friends, his nurses, and his trusted advisers—where he had a right to be to prepare for the solemn scenes of his approaching dissolution.

4. The actual frauds that were practiced may be grouped together as follows:

First: They conceived the plan of making him believe that the will of January, 1874, was void for informality in its execution. They saw that before anything was to be said against any bequests, or against the character of any of the legatees, in order that they might not be met with the argument that it was too late now—that the will had been made; no changes could now be made—it would become necessary to get rid of the will of 1874, either by a new one or by codicils thereto; when that was out of the way, then an open field would lie before them to make out such a will as would suit themselves; hence, they commenced fraud number one, which consisted in impressing on his weak mind the adroit, well-planned, but transparent lie, that the will of January, 1874, was defective because the subscribing witnesses had not put down their residences. All lawyers know, most laymen know, that such omission does not in any degree invalidate the will.

The evidence was that the proponents had talked over the pretended defect. It is apparent that they had taken it to some lawyer, and he had told them that the onission did not invalidate the will; but they resolved to use the discovery as a "good enough Morgan," and hence they persisted in playing the fraud upon him by telling him that the will was not properly executed. He often said, "I don't want to make any changes in my will." The proponent gives one of his lucid versions to the matter.

Question. Did you ever state to the testator, at any time, that the places of the residences of the different witnesses were not stated in the will, or were not known; and that such omission might prove embarrassing in the future, or words to that effect?

Answer. I can't say for certain. I might possibly have said it.

Q. Did you ever hear your wife, or her sister, say to the testator anything like that?

A. I think I heard my sister-in-law say to the testator that the place of their residence was not in the will.

Q. When did you hear her say that?

A. I think it was some time in October, 1874. No; it was a month or two before he died. It was in July, 1874. No; I recollect now, it was in September—I remember the circumstance.

Q. What time?

A. It was the evening of the day of the funeral.

This fraud was practiced on the dying man at the very time when he was protesting that he wanted to make no changes in his will. But having yielded to fears excited that his will was void by reason of the omission of the witnesses to state their residences, aroused by the fear of dying intestate, he yields that point, and consents either to consent to make a new will, or make codicils, or have the lawyer come and fix it so that it would be legal.

Having gained the first point, and overcome his express desire "not to make any changes," the remaining task to accomplish any and all other wicked purposes was easy. Having by fraud made the decedent consent to make new codicils, the next step was to determine in the minds of the conspirators *what* changes should be made.

Fraud No. 2 consisted of the scheme to get rid of Mr. Carpenter. That was to be brought about by using the scissors on the letter of the nephew, and parading the words before the remnants of the intellect of that slow dying paralytic, "Carpenter is a villain." "Carpenter's no man to be an executor." "Your own dear nephew says he is a villain, and has undoubted proof." The nephew had written his uncle a letter which would have been damaging to the proponents, if put in evidence, but it contained the words "Carpenter is a villain." "He is no man to be an executor." The proponents' counsel were so unwise as to cut out those words, and offer them in evidence, detached from the letter. The truth was that this pious nephew (a sort of a preacher) was anxious to have Carpenter discarded as executor in order that he might have the place himself. It turned out to be a boomerang, to trouble the hypocrite. It became necessary to say nothing against the nephew while they were manipulating matters against Carpenter, because they were using the nephew as a witness against Carpenter. But as soon as they deemed the mind of the decedent sufficiently poisoned against Carpenter, they then opened against the nephew himself.

Fraud No. 3, which consisted of the cut leaves which the nephew had attempted to explain. The decedent, no doubt to get rid of their importunities while in his weak state of mind said, "Yes, strike out Alex.; if he would do all this he must be a rascal and a villain." And yet in his lucid intervals, it is evident that he did not know that he had cut his nephew out of his will. The next step in this drama of fraud was to get rid of Mrs. Thatcher and her daughter and the little orphan children at Orange. So firmly were the testator's affections placed upon this lady and her family, that they dared not open their schemes against her until May or June, nor until that enervating disease which they saw was rapidly carrying their victim to the tomb had made him an easy prey to their designs.

Fraud No. 4 consisted in creating the delusion that Mrs. Thatcher had been robbing him. This was done by the proponent, with the aid of others in his family, as the evidence shows, substantially as follows:

After discussing what had been done for Mrs. Thatcher, proponent brings in the books and says: "Why, John, I can't make out anything from these books. They are all wrong. They have had them at Mrs. Thatcher's. They have fixed them to suit themselves. Why, you have been robbed!" The decedent did not stop to see what sort of a bookkeeper was addressing him. No wonder that the proponent could not make out anything from the books. It would have been as appropriate to employ him in calculating an eclipse of the sun as to ask him to determine correct results from his examination of a set of account books. He knew that Hancock had made his home at Mrs. Thatcher's for nearly 15 years. He knew that a man of Hancock's wealth could well afford to pay for such care and nursing as he enjoyed at least $2,000 per year—a sum equal to $30,000. He knew that all the money that Mrs. Thatcher had received was nothing like that sum, and yet he attempted to impress upon the mind of the decedent that he had been robbed by Mrs. Thatcher. But they had other arrows in their quiver. Maria comes to the front. She tells her brother that Mrs. Thatcher had tried to marry him, and tried to seduce him.

By what process the mind of the decedent was filled with the delusion that his friends at Orange intended to poison him, is known to none but Omniscience and the proponent's family. But the law has wisely and humanely stepped in and said that the contestants are not bound to give the process by which the delusion was created. It is enough to show the existence of the delusion. The Court of Appeals said in the case of Tyler vs. Gardiner, hereinbefore cited (35 N. Y., 594): "It is not to be supposed that fraud and undue influence are ordinarily susceptible of direct proof." This very delusion in reference to fear of poison, while it was used as an influence to deprive Mrs. Thatcher of any share in the estate, is a powerful argument that the decedent was insane.

In Seaman's Friend Society vs. Hopper (33 N. Y., 624), the law is laid down as follows: "If a person persistently believes supposed facts which have no real existence, except in his perverted imagination, and against all evidence and probability, and conducts himself, however logically, upon the assumption of their existence, he is, so far as they are concerned, under a marked delusion, and delusion in that sense is insanity."

Having got rid of Mrs. Thatcher and the other legatees at Orange it becomes an easy matter to dispose of the little innocents of the orphan asylum at Orange. The conduct of the proponents during the last days of the testator's life furnishes evidence of the strongest character that they were haunted by spectres of their frauds in procuring the last two codicils, and were determined to obtain possession of every dollar of his property without regard to wills or codicils, and thereby prevent any investigation which would expose their infamy. To accomplish this the proponents employed a person calling himself a lawyer to prepare a power of attorney containing a transfer of all the property of the decedent to the persons who had procured the codicils to be made; to which they procured the signature of the decedent to be affixed while in a moribund condition, which they took to his bankers and demanded the decedent's money. The papers being informal the bankers declined to pay until papers could be properly authenticated. They were taken back to a notary for correction. But before they could again reach the bank, the testator was dead.

The two codicils were set aside by the Probate Judge on the ground of undue influence alone. His decree was affirmed at the General Term of the Supreme Court and again by the Court of Appeals. The case is reported in the Supreme Court in 22 Hun. 40. The opinion of the Surrogate was very learned, lengthy and elaborate; while it was followed in the higher courts, yet it was not *republished* in the appellate courts.

Permit, in conclusion, a single reflection upon the moral aspect of this singular case:

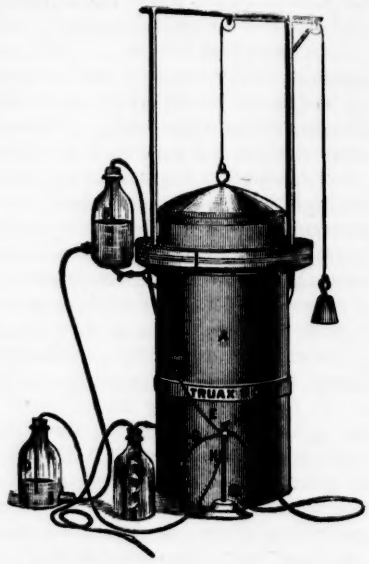
All experience shows, all history proves, from the earliest moment of recorded time, that one of the brightest attributes of human nature is that which prompts respect for the solemn scenes which surround the departure of a human soul. Among all civilized people, particularly among Christian and Hebrew societies, aye! even among pagan nations in modern times, when the wings of the Angel of Death begin to cast their dark shadow upon a household all business is laid aside, passion is hushed, avarice is mute, footsteps are muffled, friends communicate in whispers, silence surrounds the solemn scene. If the ties of blood or affection are about to be severed, tears of affection bedew our cheeks while aspirations of prayer escape our lips. What do we find in this case? No sooner is the alarm given that the dread summons is approaching, than fleet horses are harnessed, a huge document is prepared bearing great seals. The pretended executor of the estate of the dying man, and his unwilling beneficiary to the amount of thousands of dollars, procures a dual signature to a document giving the substantial control of every dollar of his estate to himself; and instead of standing by the bedside of his friend to show sympathy and comfort, he is seen, armed with his commission, flying back and forth to perfect his documents for two full days between Spring Valley and New York, with all the speed which nimble-footed horses and lightning express trains could afford, until we find him knocking at the door of the bankers of the decedent to seize his last dollar at the very moment when the immortal soul of that benefactor was taking its departure to realms unknown. Seldom do the annals of avarice show a more depraved exhibition of human nature.

A NEW FORM OF APPARATUS FOR ADMINISTERING GASEOUS ENEMATA.

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty-Eighth Annual Meeting of the American Medical Association, June 7, 1887.

BY J. H. KELLOGG, M.D.,
OF BATTLE CREEK, MICH.

The phenomenal interest which has been manifested in the so-called Bergeon method of treating pulmonary consumption by means of gaseous enemata, which is by no means confined to the profession, but has been largely shared by the general public, has created a most unprecedented demand for a new form of medical appliance designed to administer gaseous enemata. Thus far this demand has been supplied by the simple and effective device of Dr. Morel. Many of those who have undertaken the extensive use of this apparatus, have experienced great annoyance by reason of the almost utter impossibility of totally excluding atmospheric air from the apparatus. The inaccurate and tedious mode of using it, and the necessity for the handling of corrosive chemicals in the treatment of each individual case. I encountered all these difficulties at once on beginning the trial of the new method, and was deeply impressed with the importance of designing some more exact and less inconvenient method of administering the treatment. I soon designed and subsequently had constructed the simple apparatus which I herewith exhibit. The special features of the apparatus consist:



1. Of an ordinary gasometer similar to that used in the Waldenberg apparatus for the treatment of pulmonary diseases.

2. Of 2 three-necked Wolffe's bottles. The 2 bottles are connected by means of glass and rubber tubes. The 2 wash bottles are connected thus: The perforated rubber stopper of the middle neck of each bottle has fitted into it a glass tube of sufficient length to reach to within a quarter of an inch of the bottom of the bottle. These 2 tubes are connected by a continuous tube. The corresponding side necks of the 2 bottles are connected by means of rubber tubes attached to glass tubes, in the perforated stoppers of just sufficient length to reach through the stopper. Each end of each of these tubes is supplied with a stop-cock, such as is used with the ordinary fountain syringe. Each tube is divided in the center, and each end connected to the opposing ends of a brass tube made in the form of a T. To these T's are connected, on one side, a tube leading to the gasometer or storage tank, and on the other, a rubber tube leading to a wash bottle containing water charged with sulphuretted hydrogen, as in the apparatus now in use, from which the mixed gases are conveyed to the patient in the usual way.

To prepare the apparatus for use we have only to fill the gasometer with carbon dioxide and one of the Wolffe bottles with water, and all is in readiness. Pressure is obtained by elevating the Wolffe bottle which is filled with water, to a height of 12 to 20 inches. After elevating the bottle, open the stop-cock controlling the connection between the upper bottle and the tank, and also the stop-cock controlling

the connection between the lower bottle and the mixing bottle. The water in the upper bottle now begins at once to syphon into the lower bottle, and in so doing displaces the contents of the lower bottle while the upper bottle fills with CO_2 from the tank. When the upper bottle is empty, it is only necessary to close the 2 stop-cocks, reverse the positions of the bottles, and open the opposite corresponding stop-cocks, and the same action will be repeated.

This apparatus is, of course, designed especially for office use. From what I have seen and learned of this method of treatment, I am inclined to believe that it is not by any means prudent to leave it in the hands of an ordinary nurse. A thoroughly trained nurse could, undoubtedly, learn to administer the treatment as well as a physician, and might safely be trusted with the treatment in individual cases, as has been suggested; but educated nurses are not abundant, and certainly ordinary nurses, which are the only ones accessible in the majority of cases, except in a few of the larger cities, are wholly incompetent to administer a remedy which has produced death in lower animals in so small doses as 1 and ½ cubic inch. I am also of the opinion that the treatment may be much more successfully carried out in an office practice than at the bedside, except, of course, in cases in which the patient is so reduced by disease as to be confined to his bed or his room. For cases of the sort last mentioned, the apparatus which I am describing cannot, of course, replace the Morel apparatus. But I am confident that for office use it will be found very much superior to the Morel apparatus in at least the following particulars:

1. Convenience. A storage tank may be employed of any size desired. The tank which I here exhibit holds 10 gallons and cost less than $6. The carbon dioxide may be made at any convenient time and may be kept in a tank without deterioriation for almost any length of time.

Another element of convenience is found in the fact that when set going the apparatus is nearly automatic. The Wolffe bottles which I show here hold about 1 litre each, and consequently it is necessary to make but 1 change in the apparatus for each litre of gas employed, whereas, in the old apparatus, the physician must keep his hand continually upon the injecting bulb and give undivided attention to the management of the apparatus. By the employment of bottles holding 1 gallon or more, the number of attachments of the apparatus necessary in a given treatment may be proportionately lessened.

2. Comfort of the patient. There has been much complaint of pain caused by the employment of gaseous enemata, and patients have in numerous instances discontinued the treatment on this account, who might possibly have been benefited if the treatment could have been continued. The chief cause of pain is generally believed to be the injection of air, or the too rapid administration of the gas. It is almost impossible to effect the injection of small quantities of air in the use of the Morel apparatus. It is impossible to roll the rubber bag so tight that every particle of air will be excluded, and the greatest care is necessary to prevent the inclusion of so great a quantity of air as to give the patient much discomfort. It is also not at all easy to maintain a constant or uniform flow of gas by means of an injecting bulb, which is necessarily intermittent. This new apparatus wholly obviates both of these difficulties. When the storage tanks and the 3 bottles employed are once filled with carbon dioxide it is impossible for any air to find access to the apparatus or to be injected.

In filling the storage tank, the total exclusion of air may be secured by simply sinking the inner cylinder until it is wholly filled with water, while the amount of air in the wash bottles is so small that a single filling and emptying of each of the Wolffe bottles is sufficient to exclude it entirely. The advantage which this apparatus presents over the Morel apparatus in this particular is as great as that presented by the fountain syringe over the old-fashioned bulb or piston syringe. In the employment of this apparatus, the flow of gas is necessarily uniform, or so nearly so that no perceptible change could possibly be observed by the patient. The rate of flow may be regulated to a nicety by the elevation or lowering of the bottle which is filled with water. Any degree of pressure desired may be obtained. I have found an elevation of 20 inches to be sufficient to overcome the pressure of gas within the bowels. The time required for the injection of a litre of gas by this apparatus, the acting bottle being raised to a height of 20 inches, is from 2 to 3 minutes; with an elevation of 10 inches, the action is considerably slower. The flow of gases may be instantly stopped at any moment by the closure of either one of the 2 stop-cocks, which are also open. When the apparatus is in action, the patient or physician may stop the flow of gas instantly by simply depressing the conducting or injecting tubes.

3. Accuracy. In the employment of so powerful a toxic agent as sulphuretted hydrogen, it must be evident that the matter of precise and carefully regulated doses is just as important as in the employment of arsenic, strychnia, morphia, or other agents capable of producing poisonous as well as therapeutic effects.

A rubber bag and an injecting bulb can hardly be regarded as the equivalent of the balance and the graduated burette; but by means of this apparatus, the amount of carbon dioxide injected may be measured with the greatest precision. It is only necessary to graduate the Wolffe bottles by which the flow of gas is actuated, and by noticing the amount of liquid moved from one bottle to the other, the precise amount of gas which has been injected may be ascertained. In this respect, the apparatus seems to leave nothing to be desired. The liquid employed in the bottles is simply water colored with a little analine to render the movements of the liquid more perceptible. As presented here, the apparatus is in a somewhat crude form as it is the first one which I have constructed, and a more complete apparatus which I had ordered made was not completed in time to present to this meeting. Nevertheless, I have been employing it for some little time, and have been much pleased with its performance.

One patient to whom the Morel apparatus invariably gave a very considerable amount of pain, notwithstanding the greatest care in its use, receives the treatment from this apparatus without the slightest discomfort.

I think the use of Wolff's bottles with but 2 necks and an opening at the bottom of the bottle will be found more convenient than the form which I am now using, as it will obviate the use of the syphon which fails to operate without tilting the bottle after the column of water has been broken by allowing the upper bottle to become completely empty. I have also devised a more convenient and substantial arrangement of the stop-cocks which I am having constructed.

I do not offer this apparatus as one which must necessarily supplant the Morel apparatus, but for office use and for careful scientific investigation it offers the elements of convenience to the physician, comfort to the patient and accuracy of dosage, advantages which must be at once appreciated by those who are at all familiar with the administration of this new mode of treatment.

AIDS IN THE PREVENTION OF FEVERS.

Abstract of a Paper read before the Section on Practice of Medicine, Materia Medica and Physiology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY R. W. SEAY, M.D.,
OF PILCHER'S POINT, LA.

In July, 1883, I was called to see L. G. L., who was suffering from a severe attack of remittent fever, from which he had not been free for the past seven days. By a judicious course of treatment his fever was abated by noon next day. I called in the evening, and as I was cautioning him to take sulphate of quinine as I directed, and that if, in spite of the treatment, the fever should return, he must take a fluid mixture I left to be taken during the existence of the fever, he said: "Can't I take some of the fever mixture whether the fever is on me or not?" I thought a moment, and as I looked upon his pale, emaciated face and knew the disastrous effects a return of fever would have upon him, and as I hoped to be able to see him again in six or eight hours, I told him to take the mixture just as he had taken it while the fever was upon him. He was also directed to keep up the quinine. He had no return of fever for weeks.

His query and the beneficial effects of the treatment pursued made me reflect on the use more often, as preventatives, of those remedies which we use during the pyrexia. I have since tried this experiment in more than 100 cases, and in every case in which the test was properly carried out, there was no return of fever. I desire that you should understand that I allude more particularly to intermittent malarial fevers, but I think the day is not distant when this form of treatment can be beneficially used in obstetric and surgical cases.

In recapitulation of the causes of fever we will say they are:

1. Arterial contraction.
2. Accelerated action of heart.
3. Increased tissue metamorphosis or oxidation.
4. Probably a nervous influence causing an inhibitory influence on the usual changes in transformation.

If we can give remedies which will prevent the three first known causes mentioned and the last theoretical cause, we can lessen or entirely prevent the occurrence of fever, in many cases. We all use these remedies in the pyrexia, and we can advantageously use them in the preventive treatment. We have such remedies in veratrum viride, aconite and similar remedies. Veratrum viride acts upon the cardiac ganglia and the muscular substance of the heart, as is proved by paralyzing the pneumogastric with atropia, and it still affects these parts. Aconite, we are told, acts in the same way. I do not mean, in using these remedies, to prohibit the use of quinine, but that their proper use, as suggested, as *aids in the prevention of fevers.* Use, for instance, for an adult not very weak, this prescription:

℞ Tr. veratri viridi (Norwood's)..... ♏xxxij.
Tr. aconitii..... ♏xxxij.
Spts. ætheris nitrosi..... ʒiv.
Aquæ q. s. ad..... ʒj.
♏.

S. Give, in a half-wineglass of water, a teaspoonful every 3 hours, beginning 9 hours before the expected return of fever, and discontinue after fever time has passed.

I desire to impress upon you that I wish to recommend medicine which will prevent the four causes which I have summed up as producing fever, rather than recommend any particular medicines, for we may have our own preference for several remedies, either of which may produce the same effect. One may prefer, for instance, veratrum viride to either aconite or gelsemium, while another may prefer to use aconite in preference to any of the other cardiac sedatives. I wish the *principle* to be ever present to your minds, and then you have your choice of several varieties of prescriptions.

ATHEROMA OF THE LEFT CORONARY ARTERY RESULTING IN ANEURISM OF THE APEX OF THE LEFT VENTRICLE.

Read before the Chicago Medical Society, June 6, 1887,

BY ROBERT TILLEY, M.D.,
OF CHICAGO.

As this subject is so little associated with my usual practice it is with some hesitancy that I present even this short report. Aneurisms of the heart, however, are not common in clinical reports, and I trust that fact alone will justify the presentation of the case.

The patient was an intimate friend of mine, and it was only at his special request that I took charge of the case. He was 57 years of age, and his occupation was that of a lawyer. His previous life was unexceptionally exemplary. He did not use tobacco in any form, and was exceedingly temperate and methodical in all his habits; his carriage was such as

to suggest the impossibility of any hurry on his part. His general build may be characterized as corpulent, although when young he was very thin. At the age of 30 he was declared to be dying of consumption. Recovery, however, seems to have occurred without medical assistance.

An ill-defined malaise extending over a period of six weeks or two months suddenly increased to such an extent on the 20th of October, 1885, that he was unable to leave the house and was obliged to call assistance. This malaise consisted of wandering pains, not severe, over the chest extending to the left shoulder and down the left arm, sometimes reaching the wrist. They were not periodic, and could not be associated with any definite act of daily life, but would rather come on when any change of action was about to take place.

He first called my attention to this, thus: "I don't know whether I want to follow a doctor's directions or not. I get occasionally flying pains over my chest and in my left shoulder, but on walking about a little I can make them disappear." As he always had a marked antipathy for medicine of any kind, and I did not possess any firm conviction of any greater benefit likely to follow anything I could suggest than the benefit he claimed from exercise, I told him to continue to use the method he had found successful, and report later. At this time I had no conception of the existence in his case of atheromatous coronary arteries, nor did I suspect that the wandering pains were associated with incipient angina pectoris.

About six weeks after the interview above referred to, an acute attack of difficulty of breathing, associated with severe coughing and anxiety of countenance, came on. From this time he did not leave the house only for short walks. The pulse at this time was 120, feeble but regular. Breathing very laborious. Could not lie down on the back or left side, and only for a short time on the right side. Cough was very troublesome. No special features present in the alimentary canal. On percussion no perceptible enlargement of the heart was detected; percussion also failed to reveal any enlargement of the liver. On auscultation the heart revealed no definite abnormal sounds. The principal feature which I observed was that of a systole, the ventricles seemed to stop as though shutting down on a pledget of wool. I find that Constantin Paul refers to this symptom very definitely as associated with aneurism, or what he calls false aneurism, of the heart. It certainly struck me as the one striking feature of the case. There was at this time no œdema, no fever, no albumin in the urine.

From the beginning his condition was considered grave, and consultation was obtained from the first. Drs. H. A. Johnson and R. H. Babcock both saw the case, and the former remained as consulting physician to the end. The various heart tonics, such as strychnia, arsenic, and digitalis, were used with no demonstrable effect except this, that when the digitalis was increased so as to diminish the frequency of the heart's action, the action became so tumultuous and incoördinate that it was deemed best to let it beat at the gait that it found most convenient. In about a fortnight after the commencement of the acute attack anginal pains became more prominent, and atheroma of the coronary arteries was suspected. There was no evidence, however, of any atheroma of any superficial vessels. From this date a bottle containing carbonate of ammonia and camphor became his companion, supplemented with small pellets of nitro-glycerine, 1-100 of a grain. The latter gave more satisfaction than the nitrite of amyl. The anginal pains were not at any time characteristic for their severity, but the pallor of countenance and anxious expression were characteristic. Later on the feature of asystole was not so well marked. The feet had exhibited, on several occasions, a tendency to œdema, but about ten days before death it began to increase rapidly, and no remedies were found capable of removing it. The œdema extended gradually to the hips, abdomen, and chest, and about nine weeks after the acute attacks, while walking across the room, he fell dead.

I would like to remark here that he derived marked comfort from gentle exercise with fresh air. When the sidewalks were covered with ice so that he could not possibly walk out of doors, he would wrap up and walk in a room with the windows wide open. Nitro-glycerine and carbonate of ammonia were the only remedies that gave him any appreciable relief.

The autopsy, which he himself requested—he had a horror of being buried alive—reveals nothing remarkably peculiar except the condition of the heart. This autopsy was performed on the day following the death, by Dr. Frank Cary in the presence of Drs. H. A. and Frank S. Johnson, R. H. Babcock and myself. The heart was somewhat enlarged, all the valves were competent, there was little or no atheroma manifest except in the coronary arteries. One of these I show you almost completely occluded. It was just below this manifest atheroma of the left coronary that in the wall of the left ventricle near the apex the aneurism had developed. I should characterize it as about the size of a large walnut. The wall of the heart in the thinnest part was estimated by Dr. F. S. Johnson as only two millimètres thick. The aneurismal cavity was filled with blood, part of which showed signs of organization and part signs of disintegration. The clot was evidently formed at two different periods. The microscopic sections for which I am indebted to the kindness of Dr. F. S. Johnson shows this well. There were no signs of chronic endocarditis, but some of slight chronic myocarditis.

Bramwell divides aneurisms of the heart into acute and chronic. Constantin Paul calls such cases false aneurisms, and then adopts the same division. "Acute Aneurism," says Bramwell,[1] "may result from anything which causes rapid local softening of a limited portion of the cardiac wall. Acute ulcerative endocarditis, acute localized myocarditis and acute softening the result of thrombosis of the coronory arteries are the conditions which are most likely to cause acute local dilatation of this description."

[1] Bramwell, Diseases of the Heart, p. 576.

"Chronic aneurisms of the heart," he continues, "are almost always the result of chronic myocarditis. Fatty degeneration seems to be an occasional though extremely rare cause of this condition." He nowhere calls direct attention to an atheromatous condition of the coronary arteries as a cause. Constantin Paul speaks of a case under his observation where there was an atheromatous condition of the aorta and he supposed this to be the starting point in the case that he reports.

Dr. Mary Putnam Jacobi says (in Wood's Reference Handbook): "The essential cause of heart-aneurism is thus identical with arterial aneurism, the lesion of structure is however different as might be expected from the difference of tissue in the heart and arteries. In the latter, that is, the arteries, non-traumatic aneurism nearly always depends on atheroma; in the former upon fibroid disease the result of chronic interstitial myocarditis."

In the present case, I think, there is no doubt that the starting point was the diminished calibre of the left coronary artery by this atheromatous condition diminishing the supply of nutriment to the corresponding tissue and thus producing the extreme thinness of the walls in the part supplied by the artery. The clot of blood was probably the result of the incapacity of the left ventricle to completely contract and expel its contents and probably occurred in part at the time of his acute sickness about 9 weeks before death.

The presence of this clot of blood fully explained the characteristic sound which I clearly recognized at the first and which I described as though the ventricle contracted on a pledget of wool.

COCKLE-BUR REMOVED BY TRACHEOTOMY FROM THE LARYNX.

Read before the Medical Society of the District of Columbia, May 4, 1887.

BY J. FORD THOMPSON, M.D.,

OF WASHINGTON, D. C.

W. D., white, æt. 16, admitted to Children's Hospital, 8.30 P.M., April 20, 1887. He was brought to the Hospital by Dr. Stone, of Brightwood. He was playing ball, having a cockle-bur in his mouth, which he drew into his larynx by a deep inspiration following violent exertion. Violent coughing ensued, accompanied by bloody expectoration, total aphonia, and considerable dyspnœa. Dr. Stone saw him immedtately after the accident, but was unable to remove the bur with the instruments at hand. Concluding that tracheotomy was called for he brought the boy to the hospital, having telephoned me to be on hand to operate.

When I saw him he was breathing so quietly and easily that I doubted the presence of any foreign substance in the wind-pipe, although there was tenderness about the larynx and he would not make an effort to talk. I passed an œsopheal bougie down to the stomach without result. I then passed my index finger into the larynx and readily detected the bur. Free emesis followed, but no relief. Considering it a case for extracting by the aid of the laryngoscope, and not having the necessary instruments in the hospital at the time, I determined to take him to Dr. C. E. Hagner's office. Dr. Hagner and Dr. Murray, who happened to be present, examined him and readily saw the bur. Dr. H. made repeated efforts to extract it but failed. He was sent back to the hospital with instructions to watch him closely during the night and to administer bromide of potassium, and apply wet cloths to the neck.

April 21. 10.30 A.M. Had passed a fairly comfortable night; refused to take any nourishment. Present Drs. Hagner, Triplett, Stone, Cutter, Mundel and the house assistants. Dr. Hagner used the mirror but did not see the body; considerable mucus in larynx. He was still breathing easily, with no cough. I decided to open the trachea at once. After chloroform was administered, I cut through the two upper rings of the trachea, and as this opening was not sufficient, I extended it through the body of the cricord. I inserted a loop of silk to each side of the cartilage to keep the wound open, as they were less in the way than the retractors. I made every effort to detect and grasp the body with tracheal forceps but failed. I then introduced the index finger of my left hand into the larynx and readily felt the bur, which was to the left side, probably in the ventricle. I introduced the curved forceps through the wound and dislodged the body, and with the aid of the fingers in the larynx pushed it upwards and extracted it through the mouth. I inserted a tube which was left in for 24 hours.

April 22.—Rested well during night. Temp. 99°. Tube taken out.

April 23.—Doing well. Lower part of wound healed by first intention, the tube opening left to heal by granulation.

April 24.—Speaks in his natural tone; appetite good.

April 30.—Discharged cured.

I would call especial attention to the ease and thoroughness of exploration of the larynx by the fingers as shown in this case. I scarcely believed it possible before to do it so readily and so satifactorily.

Other cases reported are:

1. Cockle-bur in larynx. Drs. Brown and Van Note. S. C., æt. 11, running across a field, fell; cockle-bur flew in mouth and into larynx. Respiration labored and voice of a croupy whisper. Introduced probang into stomach to be sure it was not in œsophagus. Could not remove with forceps so 48 hours after accident performed laryngotomy. Bur in right ventricle. Recovery.

2. Cockle-bur in larynx. S. T. Armstrong, M.D., Asst. Surg. U. S. Marine Hospt. Service, Memphis, Tenn. S. Miller, colored, æt. 11, while running in a field with mouth open inhaled cockle-bur which was blown by wind. Oct. 14. Breathing difficult, deglutition painful. Palliative means used by a physician of Memphis. Dr. A. saw him in consultation at 16. Curved forceps used but failed. They were then introduced through incision but failed to dislodge or grasp it. Finger introduced in mouth

and with aid of forceps through incisions brought out through mouth.

3. Cockle-bur in larynx. Geo. W. Norman, Sweet Mills, Ky., Oct. 24, 1879. Bur lodged in larynx by inhalation during some exertion. Free vomiting and coughing failèd to dislodge it. Tracheotomy was performed next morning and wound left open 6 days. At the end of that time it was coughed up. Recovery.

MEDICAL PROGRESS.

ARTIFICIAL AND COMBINED DRAINAGE OF THE BLADDER, KIDNEYS, AND UTERUS THROUGH THE VAGINA, WITH AND WITHOUT GRADUATED PRESSURE.—DR. NATHAN BOZEMAN, of New York, read a paper on this subject in the Section on Gynecology of the IXth International Medical Congress. He described an instrument which he had devised recently. This draws the uterine away from the mucous membrane, and in the most perfect manner. He has also been able to combine in the same instrument drainage with the dilatation of the cicatricial tissue of the vagina. The form of the instruments which concerns us here is intended for drainage alone, and I have called them intra-vaginal and vulvo-vaginal drainage-supports. The intra-vaginal instrument is applicable in most cases to all positions of the body. The vulvo-vaginal form is suited to the recumbent position, and to cases where the perineum is lacerated. These can be introduced and removed by the patient when necessary. They are small and simple, free from angles and sharp bodies, are readily kept clean, and excite no discomfort or irritation of the vagina. They do not press on the rectum or vagina, nor do they interfere with locomotion.

The author closed his paper with the following conclusions:

1. The importance of completion of the operation for fistula has not been duly appreciated. This forms, in many cases, the principal difficulty in the successful performance of the operation for the closure of the fistular opening. In other cases, when the fistula is cured, but the complications left without treatment, they lead sooner or later to the death or suffering of the patient. The greatest care should therefore be taken to discover and remove them.

2. Kolpokleisis, occlusion of the os uteri, and incision of the cervix in the bladder or rectum, are unjustifiable operations. They destroy the functions of the generative organs, lead to cystitis, then form venereal and vesicular calculi, pyelitis, and other diseases. Moreover, they are unnecessary. By means of the preparatory treatment of the complication by the aid of my button-suture and my dilating speculum, I have been able to overcome all the difficulties which have been described as indications for operation.

3. The association of combined drainage in the dilatation of the vagina is a great improvement. The inconvenience and evil effects of incontinence of urine are thereby lessened, and the duration of the treatment shortened by the more rapid healing of the incisions and the formation of less cicatricial material in the reparative process.

4. We now propose a means of palliating the suffering due to incontinence of urine in a small proportion of cases of fistula which are incurable by this method—even the dangerous one of kolpokleisis. I believe that some form of drainage may be instituted in every case, and the patient may be thus restored to enjoy life and the performance of its duties.

5. The possession of a system of combined drainage will widen the scope of the operation of kolpocystotomy, done for cystitis, by removing the evils of incontinence of urine, now the chief objection to its performance.

6. Finally, I think the operation which I call kolpourethro-cystotomy, followed by the exploration and treatment of the disease of the uterus and pelvis of the kidney, has a brilliant future before it. In the treatment of pyelitis, renal calculi, and obstruction of the ureters, it will restrict within narrow limits the operation of nephrotomy and nephrectomy.

DR. GRAILEY HEWETT, of London, said: The paper just read had shown decided advance in this line of thought. Conservative surgery, in this our day, seems to be running a race with operative surgery. He endorsed the views of the essayist thoroughly—*Medical Record*, Sept. 10, 1887.

GALVANISM IN PRURITUS VULVÆ.—DR. H. VON CAMPE, of Hanover, reports the results of a mode of treatment to which his attention was directed by a communication from W. Blackwood, which first appeared in the *Polyclinic*, 1885. Von Campe was consulted in the beginning of August, 1885, by a woman aged 53, who was suffering from an intense itching of the vulva, groin, perineum and anus. The patient had always been healthy until 2½ years after an abortion, when she had irregular discharges of blood from the uterus, to remedy which the organ was curetted. After the curetting the discharges of blood never recurred, but she suffered from a profuse acrid discharge. In spite of various modes of treatment the condition was not remedied, but itching began in the vagina and extended gradually over the mons veneris, groin, perineum and anus. The patient consulted various physicians, one of whom even excised portions of the integument where the irritation was most intolerable, but no measure of treatment resulted in more than slight temporary relief. She had long employed injections and solutions of carbolic acid and sugar of lead, but with only slight effect.

After trying salicylic ointments and cocaine, which alleviated the distress for only a few hours, von Campe resorted to galvanism on September 21, using at first a current from 6 elements with the anode applied to the vulva and the cathode to the affected portions of the integument. The sittings lasted 10 minutes. A weak solution of carbolic acid was also prescribed, to be employed night and morning. Two days later the patient reported that the pruritus left

her immediately after the application of the current and that she had enjoyed a respite of several hours. The patient was then subjected to the galvanic treatment on the three following days, during which time her condition improved. Six more applications were made before October 8, with a current from 8 elements, and at this time the pruritus had nearly disappeared, leaving only a slight prickling pain. The integument had healed over in spots and the skin looked quite natural. The patient reported that she was able to sleep all night for the first time in five years. Two more applications of galvanism were made before October 16, by which time the pain had quite disappeared and the skin had nearly healed. Treatment was reapplied on October 24, 25 and 26, from which time until November 20 she was entirely free from the pruritus. Then experiencing a slight return of the trouble, she returned and the parts were again galvanized several times, after which the affection of the skin entirely disappeared. Since then the patient has often been heard from. Pruritus is occasionally felt, but only in a slight degree. For the most part the discharge has continued, but it is much less profuse. Both conditions are easily controlled by the use of weak douches of carbolic acid. —*Centralbl. für Gynakol.*, No. 33, 1887.

ACTION OF QUININE AND ALLIED SUBSTANCES ON CONTRACTILE TISSUES.—In a paper on this subject read at the late annual meeting of the British Medical Association MR. R. B. WILD draws the following conclusions from a series of experiments:

To summarize the results of my experiments, I believe that quinine acts essentially in the same manner on all forms of contractile tissue. In small doses it stimulates, as shown in the heart, the increased height of contraction of voluntary muscle, and the initial contraction of the vessels.

In larger doses, or after longer action of small doses, it completely paralyses the contractile power of the tissue; this is seen in the arrest of amœboid movement, the cessation of response to stimuli in voluntary muscle, the stopping of the heart in diastole, and the dilatation of the vessels.

In very large doses, or after very prolonged action, quinine causes contractile tissues to pass into a state of rigor mortis, as shown by the small spherical condition of leucocytes, the rigidity of voluntary muscle, the contracted state of the heart, the secondary contraction of the vessels after long exposure to the poison, and the contracted state of the œsophagus.

Voluntary muscle (that is, the tissue in which contractility is developed to its greatest extent) was most susceptible to the action of quinine, and was thrown into rigor mortis by solutions which produce paralysis only of the less specialized tissues; with strong solutions (for example, 1-000) voluntary muscle passes into rigor mortis so rapidly that the period of paralysis is abolished, and the tissue, after a short period of increased contraction, passes directly into a rigid and contracted condition.

I have not the time to enter into the action of other drugs allied to quinine; shortly, I found cinchonine to act like weaker solutions of quinine; cinchonidine had a similar but more powerful action on voluntary muscle than quinine; quinidine, on the other hand, acted as a direct depressant, the muscle dying with great rapidity.—*British Medical Journal*, Sept. 3, 1887.

COLD WATER IN TYPHOID FEVER.—DR. S. P. ALLEN, of Whitney's Point, New York, says: The following conclusions, which were given by Dr. Austin Flint, after closely watching the effects of cold water externally in the treatment of 17 cases of typhoid fever that came under his care in Bellevue Hospital some years ago, are sustained by the results in 13 cases that occurred in my practice since that time:

1. That by the use of cold water externally in cases of typhoid fever the temperature of the body may, after a variable time of its continuance, be reduced to 102°, or even lower.

2. After a period varying very much in different cases, and also at different times in the same case, the temperature rises as high or higher than before the reduction.

3. Upon repeating the employment of cold as often as the axillary temperature exceeds 103°, the number of repetitions necessary is extremely variable in different cases.

4. The sponge-bath, with the wet sheet and sprinkling, may be employed to the exclusion of the bath-tub in the treatment of typhoid fever.

5. These modes of employing cold water may be continued sufficiently long for the reduction of the temperature to 102°, or even lower, and repeated as often as may be required, without fear of injury. And the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased; and that the reduction of the temperature by these modes, as often as it rises above 103°, improves the condition of the patient.

6. The results of the analysis of those cases where cold has been faithfully used, afford us encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life. —*Medical Times*, Sept. 3, 1887.

SPARTËINE, A HEART STIMULANT.—LANGGAARD reports the following formulæ, which he found useful in 18 cases of heart diseases:

℞ Spartëin. sulph..... gr. 6.
Pulv. rad. liquirit
Succ. liquiritæ..... āā q. s.
Ft. pil. 20 in num.
Sig. One or two pills from 2 to 4 times daily.

Also

℞ Spartëin. sulph..... gr. ℥ to gr. 7.
Ad. destill..... ℥ 2½.
Solve.
Sig. Twenty drops, from 2 to 4 times daily, in sweetened water or wine.

℞ Spartëin. sulph..... gr. 3 to gr. 7.
Syr. aurant. cort..... ℥ 12½
Solve.
Sig. A small teaspoonful in water, from 2 to 4 times daily.

—*Therapeutische Monatschefte*, June, 1887.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

The Editor of this Journal would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, OCTOBER 1, 1887.

THE PHYSIOLOGY OF DERMATO-THERAPEUTICS.

Dermatology is a subject to which the general practitioner probably pays less attention than he does to any other department of medicine, except, perhaps etiology—a fact which is most probably due to the little attention given to the subject in the college courses. Yet our readers may be interested in an analysis of a paper read at the late annnal meeting of the British Medical Asscciation by one of the great masters of dermatology, Dr. P. G. Unna, of Hamburg. For many years there has been a vast amount of discussion as to the absorptive power of the skin, and it is not very long since physiologists carried the day against the balneologists and general practitioners, and proved that the absorptive power of the skin is very limited. But while it has been shown that indifferent salts, applied to the outer skin in the form of ointments, pass into the circulation in very minute quantities, we have at the same time learned that volatile substances, and such as attack the horny layer of the skin, even to the slightest extent, are absorbed by the skin without difficulty. With this fact before us we must arrange our medication on this principle when we wish to pass through a thickened or normal horny layer in order to reach a deep-seated focus of disease.

Of course what has been said of the limited absorptive capacity of the skin does not hold good when there is no horny layer to deal with; as in cases of ulcers in which the papillary layer is necrosed, or in pustular processes, burns and wounds; or in cases in which the upper strata of the horny layer are absent, though the basal cells are still present, but swollen, as in eczema, pemphigus and other bullous affections. It should be borne in mind, however, that the horny layer itself is not what prevents the absorption of certain substances through the skin, but its property of attracting and absorbing the skin fat, which renders it impermeable. But in the majority of skin diseases we have to take in account an absorptive power of the skin or what is left of it, that is greater than the normal. While the natural horny layer opposes the entrance of medicinal substances, the diseased portions of the skin take them up readily, and the drugs act more promptly and powerfully on these than on the healthy portions of the skin. Again, the diseased skin "controls up to a certain point the selective action of the drugs and regulates their effects, so that it is the morbid portions which are chiefly affected." This selection of diseased organs for remedies which are intended to act on them is not an infrequent occurrence. But it is not enough to bring the needed drug in contact with the surface. In some cases the horny layer is normal or hypertrophied, and yet an intense penetration is very necessary, in order to remove deeply situated germs of a fungoid nature, and of an infectious kind, such as lupus, lepra, lichen ruber, psoriasis, furunculosis. Again, there are many dermatoses in which at least a part of the horny layer is laid bare, but in which the absorption—the centripetal suction—of the drugs is opposed by the strong centrifugal floor of the tissue-juices permeating the swollen scarf skin. Such cases are weeping eczemas, impetigenous eruptions, ulcers (as of lupus), and all profusely secreting surfaces. The mode of application of the medicine in these cases is of great importance, and in many cases treatment gives only failure, because of the insufficient consideration of the peculiarities of the skin in the particular cases, as regards the form and manner of applying the remedies.

The agents used as applications to the diseased skin may be classified as chemical and mechanical, the former being used to modify the skin in the way desired. The most important keratolytic agent known is salicylic acid, being far more certain and controllable than soap or caustic potash; though in some cases it is not applicable while the others are. To harden the swollen and defective horny layer, on the other hand, and make it thicker and drier, so that it may be able to take up more fat, we use such keratoplastic agents as sulphur, ichthyol, resorcin, sugar, linseed oil, and all the reducing agents. In these cases there is a reduction or withdrawal of oxygen, and the keratoplastic action is limited to cases in which these agents are used in dilutions of definite weakness; and if this limit be exceeded the keratoplastic action

ceases, and a keratolytic action begins. These keratolytic and keratoplastic substances are now extensively used, either as independent remedies or as adjuvants or correctives to other drugs, and when the physician makes a proper choice and combination of them his labor is much lightened.

The mechanico-physical therapeutics of skin diseases consists in using the volatile and gaseous substances that pass readily through the horny layer of the skin. To these may be added substances, themselves but little volatile, which are readily soluble in such volatile vehicles as ether, chloroform and benzine; hence the proposal of the spraying on the diseased skin of drugs dissolved in these vehicles, a method to which but too little attention has been paid. Not only can the horny layer, impregnated by fat, be penetrated by means of the volatile spray, which dissolves out the fat, but when this is used on a deficient and swollen horny layer it has a drying effect by causing the abstraction of water. Unna has often cured eczemas by means of the pure alcohol spray, and superficial fungoid affections with the chloroform spray. "The oleates, the powers of which when used in salves are often over-estimated, attain their highest utility when employed in solution in the ether spray."

There are certain physical means also, to understand the application of which one has to remember the anatomy and physiology of the skin. The principle underlying these methods is that the products and secretions of the skin, which are notably partly of a fluid and partly of a fatty nature, are either accumulated or got rid of by artificial means. Practically we need consider only three products of the skin: 1. The water-vapor or insensible perspiration, which is continually evaporating over the surface of the body. 2. The watery sweat. 3. The fatty sweat. The first makes up about 77 per cent. of the whole water evaporation of the skin, and can only be suppressed by a warm or a steam bath; its suppression being compensated for by a large increase of the watery sweat. By means of a partial stoppage of this we can soften the horny layer. But it is much easier to cause retention of the fluid sweat, both watery and fatty; for example, by a permanent water-bath, which causes an accumulation of fat in the upper skin, and this keeps back the watery secretion, and much better in normal conditions than inunction with fats. But in many skin-diseases watery secretion is enormously increased by over-filling of the papillary vessels; and in such cases inunction is of service: the redness and inflammation of the eczema or rosacea may be increased by the fatty substance, but this maceration and higher temperature may be just what is desired; and the fat should be put on in a thick layer. But by the use of gutta-percha or india-rubber the secretion may be still more completely retained. In this way the upper skin is completely soaked with water, and the horny layer becomes like the epithelial lining of the mouth. At the same time it contains but little fat, and is very permeable, and non-resistant to watery solutions. It is a mucous-like substance. When we wish to obtain the greatest possible effect of a drug upon the skin, therefore, it must be applied under an impermeable covering.

Under certain circumstances, again, it may be desired to extract and eliminate the masses of fatty and watery secretion when they are formed in abnormally large quantities, as is the case in some skin-diseases. Here we apply dry porous substances to the skin, so as to cause rapid absorption of the water and fats, such as rice-powder, and the pastes and gelatines now extensively used. As the most vigorous absorption through the skin takes place under impermeable coverings, so with these powders, pastes and gelatines, when incorporated with drugs, absorption through the skin is reduced to the lowest limits. They strengthen the centrifugal stream of secretion, and thus bring the centripetal, or stream of absorption, to the lowest limit. They dry up the horny layer, and thus increase the difficulty with which fluid substances pass through it. If, therefore, we apply volatile substances in the form of pastes and gelatines we can only look for deeply penetrating effects; and as they volatilize more easily towards the air than through the skin, it is injudicious to apply them in this manner. Under the impermeable coverings, therefore, the watery elements at once get the upper hand; while under porous bodies the fatty elements are stored, while the watery pass through and are quickly evaporated. Both these kinds of preparations act, therefore, on the stream of secretion; the one restricts secretion and favors absorption through the skin; the other promotes secretion and reduces the power of absorption through the skin. The different methods are mutually complementary, and cannot replace each other. "Only he who has them to a certain degree at his command can say that he knows and can make use of the modern method of dermato-therapeutics."

EXTIRPATION OF THE UTERUS IN CARCINOMA.

PROFESSOR HEINRICH FRITSCH has recently contributed (*Centralblatt für Gynäkologie*, No. 25, 1887), the tabulated results of 60 operations for total extirpation of the carcinomatous uterus. From

his paper it appears that 10 per cent. of the patients died from the effects of the operation, a mortality which corresponds to that of laparotomy in general. Of the survivors 20 thus far remain without recurrence; in 2 cases a period of more than 3 years has elapsed since the operation; in 7 cases more than 2 years have elapsed; while most of the other patients have already passed the most dangerous period—the first 6 months. From this Fritsch makes the point that after total extirpation of the carcinomatous uterus recurrence occurs less frequently than after operations for carcinoma in other localities; the reason for this being, probably, that the advance of the carcinomatous process in the lymphatics and the formation of metastases takes place much less readily in the case of the non-active uterus than in the case of such an active organ as the breast, which makes strong demands on the lymphatics. This view is confirmed by the comparative infrequency with which the disease returns in multiparous and old women.

As regards the operation, a necessary condition is movability of the uterus. Parametric fixation prevents the drawing down of the uterus, but pelvic fixation does not. The size of the carcinoma is of less consequence. Especially unfavorable are those cases in which the uterus itself is destroyed, and the parametrium infiltrated, while the portio vaginalis remains healthy, since in such cases a recurrence of the disease is unavoidable, and it is better to abandon the operation, according to Fritsch. Even the hope, which he formerly entertained, that pain would be removed even though the disease returned, has not been realized, for cancerous nodules develop in the rectum, giving rise to excessive pain. The field of operation, he says, is most readily made apparent by cutting into the parametrium; and if nodules of cancer be found here the operation must be abandoned. Fritsch's method offers great advantage in that it begins with lateral incisions, the peritoneum not being opened until later in the operation; so that if the parametrium be found diseased the operator may stop, tampon the wounds with iodoform gauze, and leave the patient in no worse condition than before. If it be found difficult to draw down and remove the ovaries Fritsch leaves them *in situ*, even in the case of women who still menstruate. But usually after the removal of the uterus a slow steady pull on the ligatures suffices to bring the ovaries down.

The opening in the peritoneum is not sutured, but is merely closed by an iodoform tampon; and in using this method Fritsch has never had any trouble from prolapse of the intestines. It is not necessary after the operation that the patient maintain any especial position in order to facilitate the escape of the discharges, but she has simply to lie on her back.

A moderate increase in the size of the uterus does not materially increase the difficulties of the operation, provided the operator remember to draw down first on one angle of the uterus and then on the other. But the presence of myomata may render the removal of the organ *per vaginam* impossible. In such cases a laparotomy must, of course, be performed, and does not greatly increase the danger of the operation. In some cases Fritsch has found a vagina so distensible that he was able to draw through it a uterus as large as a child's head. In such cases the danger of wounding the bladder is of course increased, and should this accident occur the wound must be closed immediately. But if a wound be not discovered until after the operation it is better to leave it until the patient has recovered from the first operation. The ureters are seldom injured during the removal of the uterus.

In regard to prognosis, a rapidly recurring carcinoma will always appear in the cicatrix; while if it does not recur until later it will be found to affect the ligaments by preference. A smooth transverse cicatrix in the vagina gives a better prognosis than a hard irregular one. In order to improve the prognosis of this operation, which has already been shown to be justifiable, the coöperation of general practitioners is necessary, so as to bring the case to operation as soon as possible.

CREASOTE IN PHTHISIS.

According to the *Medicinische Chirurgische Rundschau*, No. 6, 1887, Dr. Sommerbrodt, of Breslau, has reported 5,000 cases of pulmonary tuberculosis treated with creasote, all being ambulatory cases, the series extending over nine years. A number of patients were treated with Bouchard and Gimbert's formulæ, 27 per cent. recovering. Other formulæ used were 13.5 parts (?) of creasote to 1 quart of alcohol or Malaga wine; 2 parts of creasote to 150 of cod-liver oil. The dose of these preparations was the same, from 3 to 5 ♏ of creasote being taken daily. Another formula used was creasote 3.5 parts, alcohol and water of each 125 parts; one teaspoonfull twice daily in a glass of water. This was used in 30 cases. The best results were obtained from the following: Gelatin capsules, each containing ♏ ¾ of creasote and ♏ 3 of balsam of tolu. On the first day of treatment the patient took one of these

capsules, two on the second day, and for eight days afterwards three were taken with water after meals. In the second week four capsules were taken daily, in the third week five capsules daily, and in the fourth week six daily, after the principal meals of the day. Given in this way the drug was well borne as a rule. This medication was frequently continued for a year, and sometimes combined with favorable climatic treatment. It was in young patients that the best results were obtained, and in the first stages of the disease, with symptoms not well defined. Good results were also obtained in scrofulous affections of glands.

The drug seemed to relieve irritation and cough, in many cases to such an extent that narcotics could be dispensed with. Bronchial secretion and night sweats were also diminished. Sommerbrodt says that the drug must be taken for three months or a year, and that the more of it taken the better the results. With such an array of cases as he presents, and with the results he has obtained, it certainly seems that the method is well worthy of trial.

CHOLERA.—It is well known that this disease has recently been on the increase in some parts of Italy and the Island of Sicily. The first importation of well-marked cases in our country was made by the steamship "Alesia," from Naples, Italy, which arrived at the New York quarantine on the night of the 22d September, 1887, with four cases of cholera on board. Eight deaths from the same disease had occurred during the voyage. Prompt measures were taken to retain the passengers in quarantine, the sick in hospital, and to have the ship thoroughly disinfected and cleansed. It is not probable that, at this season of the year, the disease will extend beyond those belonging to the ship.

A SANITARY CONVENTION, under the auspices of the Michigan State Board of Health, will be held at Owosso, Michigan, November 22 and 23, 1887. The first session will commence at 2 P.M., of the 22d, and will be free. At each session papers on subjects pertaining to the public health will be read and discussed, in such manner as to interest and profit all classes of citizens. For further information address Dr. A. M. Hume, Secretary, Owosso, Mich.

YELLOW FEVER.—The prevalence of this disease at Key West, Fla., appears to have run its course and ceased without extending to other places. No new cases were reported for the week ending September 22, and only one death.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, June 6, 1887.

THE PRESIDENT, WM. T. BELFIELD, M.D., IN THE CHAIR.

DR. FRANK BILLINGS exhibited a very interesting collection of

BACTERIAL CULTURES

and explained the mode of their culture, and gave the name and description of each bacterium.

THE PRESIDENT asked whether this method of culture was not of extreme value in differentiating the different sorts of bacteria one from another, and whether this did not enable investigators to distinguish the different sorts of bacteria.

DR. F. BILLINGS: At the present time there are three comma bacilli that are well-known: the comma bacillus of Asiatic cholera, discovered by Koch, the one discovered by Deneke in old cheese, and the one discovered by Finckler and Prior. These under the microscope look so much alike, that one would not dare to differentiate between them, but their growth in gelatine tubes is so characteristic that one can easily tell the difference. The cholera bacillus grows upon the plate in a peculiar granular colony, that does not make the gelatine fluid so quickly as the bacillus of Finckler or Deneke. Finckler makes the gelatine in tubes, fluid from above downward, first where the needle is run into it and again at the top. Those found in old cheese make it fluid in the same way, but less quickly; while the cholera bacilli grow in a characteristic funnel-shaped form. Then of the staphylococci, there is the styphylococcus pyogenes aureus, the staphylococcus pyogenes citrius, and the staphylococcus pyogenes albus, these are called white, orange and lemon color by their characteristic growth on culture media; *in time* one will be white, one orange and one lemon color, but in the first week one could not tell the difference. It is quite as important to know how to cultivate bacteria and detect the difference in growth as to know how to differentiate bacteria with the microscope by their form and their reaction to the analine dyes.

DR. LESTER CURTIS read a paper on

CALCARIOUS CONCRETIONS IN THE EXTERNAL EAR.

The following case, occurring in an old patient of mine, has seemed to me to be unusual. I had treated the patient for several years for slight ailments, chief of which was an occasional malarial attack that gave me some trouble on account of her inability to take quinine.

In August, 1886, she called my attention to a painful swelling in the external meatus of the right ear. I considered it to be a case of ordinary superficial inflammation of the meatus and directed instillation of a solution of morphine. The pain at once ceased, and in a day or two the swelling sub-

sided, and I supposed that the trouble had resolved, as has usually occurred in my experience after such treatment. But a little swelling and tenderness remained. In about two weeks, without further symptoms than a trifling uneasiness, there was a discharge of a drop of purulent fluid which I am sorry that I had no opportunity of examining. I paid no more attention to the case until about a month after this, when she called at my office, and told me that the same morning the ear had felt a little uncomfortable, and on picking it, a calcarious mass about as large as a millet seed had come away. A day or two before she had removed a similar mass. These masses, she said, resembled lumps of old lime as nearly as anything she could think of. On examining the ear I saw a red and indurated place about half way down the meatus, in the upper portion of the posterior wall. In the middle of this spot was a pit about as large as the mass removed, and surrounding the pit a greater or less amount of a white granular substance which grated against the probe and was of stony hardness. I attempted to detach some of it with the sharpened end of the probe, but it was firmly adherent, and appeared to be infiltrated throughout the tissue, and I succeeded in getting away only a few small flakes. Besides this nothing unusual was detected in the ear with the exception of a slight redness of the posterior rim of the drum head. The hearing was perfect. A slight feeling of irritation was noticed for some weeks, but gradually passed away. At present, so far as I can discover, the ear is quite normal.

I do not think that there is any possibility of the concretion being a foreign body; nothing with the exception of the morphine was introduced into the ear, and that could hardly have produced such an effect; besides, part at least of the substance was infiltrated among the tissues of the meatus. Superficial abscesses in which there is a free discharge of pus do not undergo calcareous degeneration. The appearance was that of a gouty concretion, and there is a trace of gout in the family. Her father, though an active and abstemious man, having had slight attacks of the affection, but she has never had any gouty symptom that I have been able to discover, and gout does not suppurate. I have never heard of a case like this, and the somewhat limited amount of literature on diseases of the ear, accessible to me, makes no mention of anything of the kind.

Dr. R. Tilley thought the author should have examined the concretion microscopically and determined its nature. For himself he was of the opinion it was probably composed of dried epithelia resulting from a partially absorbed furuncle.

Dr. Lester Curtis: I have no special reply to make to the conjectures. I never examined the ear of the patient before this thing occurred but I have examined both ears since that time and so far as I could see there was nothing in the shape of a sebaceous cyst in either ear. One would naturally suppose that if such things occurred there would be more than one of them. I would imagine if one should occur in such a locality there would be likely to be others. One word in regard to treatment I used, which I have recommended in a considerable number of cases and always with benefit. While I have never used the rubber tube, I have seen a good many cases where I would not venture to insert it. The solution of morphine will quiet pain in every case. And in every case I have happened to meet, it has stopped the inflammation and the pain has not recurred.

Dr. W. L. Axford: I would suggest that the case was one originally of sebaceous cyst, that the contents of the cyst had undergone calcareous changes and afterwards inflamed. I have seen that happen in the head but never in the ear.

Dr. W. L. Axford read a paper for Dr. O. G. Miller on

A GUIDE FOR THE OTIS' URETHROTOME,

in which the mechanism and workings of the guide were fully described.

Dr. R. Tilley reported a case of

ATHEROMA OF THE LEFT CORONARY ARTERY, RESULTING IN ANEURISM OF THE LEFT VENTRICLE.

(See pape 430.)

Dr. Robert H. Babcock: It was my good fortune to see the patient to whom Dr. Tilley has referred this evening, and as it was a case of remarkable interest and there are several points illustrative of the peculiar symptoms due to atheroma of the coronary arteries and also illustrative of the difficulty, many times of diagnosticating the condition, I would like to refer to them. The first symptom mentioned by Dr. Tilley as important was that of angina pectoris, and herein this case was peculiar; the pains were flitting and were relieved by gentle exercise. It was wholly characteristic, however, in that the pain extended to the left shoulder and down the left arm. That is the characteristic pain of angina pectoris, although there are so many deviations from it that angina pectoris frequently passes unrecognized by the general practitioner. There is a liability oftentimes to mistake angina pectoris for neuralgia of the stomach. I have under observation a case where the pain has been considered for years gastralgia, but it is without doubt angina pectoris, the arteries are atheromatous and there are characteristic cardiac murmurs which are due to the atherosed condition of the valves. The pain of angina may sometimes be localized in the wrists. Dr. Sawyer once mentioned to me a case in which the angina pectoris always manifested itself by a feeling of cord like constriction about each wrist. There was, however, with this an attendant paleness of the countenance and anxiety and the patient was obliged to stop in his tracks until the pain had passed. The pain in angina pectoris may extend through to the back, or up into the occiput, at other times into the right shoulder and down the right arm. It may also radiate into the abdomen and down the inside of the thighs. It is usually so severe that the patient has to stand still and wait until the pain passes by. In the case mentioned the pain was relieved by gentle exercise, and that possibly may throw some light upon the question as to whether angina pectoris is always due to arterial spasm or not. If due to arterial spasm in all cases

it would seem as if any effort of the muscular system would increase the arterial resistance through contraction of the muscles and thus make a greater demand upon the heat; in which case exercise ought to augment rather than relieve angina pectoris. Particularly if as Leyden is inclined to think angina pectoris is really due to spasm of the coronary arteries as well as general arterial spasm, resulting in temporary anæmia of the heart muscle. In cases where the paleness of countenance would seem to confirm this theory we find that remedies which produce arterial dilatation, such as the nitrite compounds, always give relief. In this case there is an apparent contradiction; not only did exercise afford relief which would seem to indicate that contraction of the peripheral vessels had nothing to do with the production of the angina, but on the other hand since nitro-glycerine gave relief, there must have been arterial spasm somewhere.

The diagnosis of this case was not as difficult as is often the case, owing to the peculiarity of the cardiac sounds, although none of us I think really suspected the condition which we found of the coagulum in the left ventricle filling up the lower third of the cavity. I gave my diagnosis of degeneration of the left ventricle, with atheroma of coronary arteries, because of the very peculiar character of the sound over the left ventricle which Dr. Tilley has very aptly described. It was a toneless, muffled sound as if the heart struck the chest wall through an intervening layer of cotton, while on passing the stethoscope from the left ventricle toward the right ventricle the first sound came out with its usual clearness and more or less of its booming quality, and it was on that that I based my diagnosis. At the post-mortem examination we found degeneration of both ventricles, more marked in the left than in the right. This case would probably be classified by Leyden as subacute. Leyden has treated this subject in the most scientific manner of any author, since generally the subject is treated in a desultory way under the various heads of chronic myocarditis, fatty degeneration, aneurism, rupture of the heart, etc.

Leyden would group together all the different expressions of the same pathological condition, that is sclerosis of coronary arteries and all conditions dependent upon that, and he considers it under one subject of the changes of the heart resulting from the sclerosis of the coronary arteries. He recognizes as acute cases those in which the patient is ill perhaps for a few moments or hours or days. The first symptom is often a sharp attack of angina pectoris, or an attack of great cardiac distress and oppression without positive pain, which Gairdner speaks of as *angina sine dolore*. In these cases the patient frequently first discloses that he has heart disease by falling dead in his tracks. In cases of atheroma of a small branch of the left coronary artery, usually the anterior descending branch, frequently we find a condition closely resembling the hæmmorrhagic infarctus and the heart ruptures at that point; in acute cases death may be due to the rupture, although more often to failure of the heart. Subacute cases, of which this seems to be an example, run their course in a few weeks or months and we find a combination of changes from acute fatty softening to chronic fibriod change, and these patients generally suffer a good deal with angina pectoris. The chronic cases are those that last for years, sometimes fifteen or twenty, and the symptoms are those of cardiac weakness or progressive cardiac failure, and these patients may die suddenly or gradually. In these cases we generally find extensive myo-carditic changes with great thinning of the heart walls.

The treatment of these cases is of course a thing which interests us. It is very unsatisfactory; is merely palliative, and consists chiefly, in the severe cases, of rest, with cardiac tonics and stimulants. Of especial service in angina pectoris are the nitrite compounds, although Leyden rather protests against the use of nitrite of amyl and nitro-glycerine. He recommends the hypodermic injection of morphine, stimulants, such as ammonia and camphor, hot alcoholic drinks, and heat to extremities. The diagnosis has to be based, in most of these cases, upon the history and symptoms of progressive or sudden cardiac failure, and if we can find evidence of atheromatous change in the peripheral vessels the diagnosis is much easier. In auscultating these cases I have frequently found what seemed to me to be a peculiarity of the first sound. The sounds of the heart are nearly always described as free from murmurs, but since the booming quality of the first sound is undoubtedly due to the muscular element, and since the muscle of the heart is degenerated, the first sound takes on rather a short and valvular quality resembling very closely a second sound, so that frequently in these cases the two sounds appear to be two valvular sounds. Although I am not yet prepared to say that one can base a diagnosis upon such a condition as that, yet I am satisfied that in cases where there has been marked atheroma of the radial arteries, with symptoms of heart failure, I have heard just this condition of shortness and valvular quality of the first sound over the left ventricle, particularly when over the right ventricle the sound is more prolonged.

DR. TILLEY said: I have nothing more to add except that I have known of two or three cases in which, after a hypodermic injection of morphine, in a condition of atheromatous coronary arteries, the patient has passed off very rapidly, and I would be chary of using it, especially if I could obtain a satisfactory result from nitro-glycerine. The form of nitro-glycerine that I used were the elegant tablets of Fraser, so much more convenient than the alcoholic solution.

DR. W. L. AXFORD: I have here the

SAC OF AN ANEURISM OF THE LEG,

not very large or elaborate, but interesting because of its locality and the history of the case. Some time last fall, along in November, a Bohemian came to the South Side Dispensary, having a little lump about as large as a walnut just above the internal malleolus. I could not get his history, as he could not talk English; all that I could make out was that it had been growing there about a year, and pained

him some. The skin was natural over the growth, which felt soft and fluctuated. I made up my mind that it was some kind of a cyst, and advised him to have it excised. On cutting down upon the growth I found at once that I had made a mistake, from the color of the sac, which was blue. One of my assistants said he saw a little artery spurt. I stitched up the wound and found I had excised the sac of an aneurism. It was about the size of a walnut when fresh. This case was peculiar, as there were none of the usual symptoms of aneurism; it was also peculiar in the large size of the sac compared with the size of the artery. The patient made an uninterrupted recovery.

Dr. Jones, of Pittsburg, Pa.: I heard only a portion of the discussion on the subject of angina pectoris. One symptom I will mention as having occurred in my own experience, that I believe is not mentioned in any of the literature that I am familiar with. In acute attacks of angina there is a feeling of constriction that may be relieved by firm pressure against a sharp body, such as the back of a chair or the edge of a table; that feeling of a patient wanting to press against some sharp substance, the back of a chair or the edge of a table, has been invariably present in all of the cases that I have seen, and I do not know that it is mentioned anywhere. The use of nitro-glycerine and amyl nitrite I would suppose would hardly be proper in chronic cases, on account of the danger spoken of, the danger of sudden cessation of the heart's action from paralysis or failure.

Dr. Lagree, of Charleston, S. C., mentioned some

PECULIAR SYMPTOMS CAUSED BY EARTHQUAKES.

The earthquake in Charleston, with us, is a thing of the past. There were some peculiar features produced by the earthquake, from a medical point of view. One of the most common conditions was an obstinate nausea, and in treating these cases we found the only remedy that would give any satisfactory result was muriate of cocaine. Another condition we found was falling off of the hair in patches, especially among the ladies. I have had three cases in which the hair gradually fell out in patches, which I attributed to nervous shock. Fortunately the hair was generally saved. Those were the most prominent symptoms produced by the earthquake.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, May 4, 1887.

The President, Jos. Taber Johnson, M.D., in the Chair.

Dr. J. Ford Thompson exhibited the specimen and gave the history of a case of

COCKLE-BUR REMOVED BY TRACHEOTOMY FROM THE LARYNX.

(See p. 432).

Dr. S. C. Busey said that Dr. Thompson had confined himself to the removal of a cockle-bur; but that Dr. Weist had published an article in which he discussed the removal of all kinds of foreign bodies from the larynx, and had collected the published cases. Some years ago he was called to see the 12-year old daughter of a physician. Her father was not certain of the cause of the pain over the left bronchus, the cough, fever and loss of appetite, expectoration and emaciation which was present, although the girl stated that she had swallowed a "cockle-bur." Dr. Busey saw her when she had been sick about ten days. He could not find any cause for the symptoms. She complained for about six months, when she coughed up the bur. The symptoms disappeared and she has not had any trouble since.

Dr. C. E. Hagner expressed his mortification that his attempts to remove the bur in the case reported had been unsuccessful. He saw it above the false vocal cords, introduced the forceps and felt them strike it. It was covered with mucus, and the forceps, instead of grasping it, slipped and pushed it out of sight. He then gave up the search. The following morning he again examined the patient, but the larynx was full of mucus and pus so that he could not see the bur at all. He agreed with Dr. Thompson that exploration with the finger is advisable. He thought it better first to anæsthetize the patient and try the forceps. If not successful with them then tracheotomy is called for. The patient referred to by Dr. Busey had frequent hæmorrhages in addition to the symptoms already mentioned. He had a case some years ago of a man who had frequent violent paroxysms of coughing and great dyspnœa. Very little air entered the left lung. Some time afterwards, while the man was climbing a steep hill, he was seized with a violent fit of coughing and expelled a grain of oats, from the oatmeal he had eaten, which was covered with mucus and was as large as a marble.

Dr. E. Carroll Morgan said that he was much interested in the history of Dr. Thompson's case, and congratulated him upon its happy termination. He was also pleased to learn that recourse was had to the laryngoscope, which is indeed to-day an indispensable, as well as a ready, means for the recognition and extraction of foreign bodies in the air passages. On the other hand, however, he regretted that in this particular patient the cockle-bur was not extractable by laryngoscopal methods. Since the introduction of the laryngoscope, operations for the removal of foreign bodies from the larynx by means of artificial openings have notably diminished. One of the most striking instances in which the value of this instrument in diagnosis was demonstrated occurred in 1876, in the experience of Dr. Samuel Johnston, then of London, but at present a practitioner in Baltimore, Md. The history of his case is briefly as follows:

A nervous boy of 14, living in Wisbeach, was suddenly seized during the night with suffocation and a feeling as if there was something sticking in his windpipe. The family were aroused and a physician sent for. The boy continued to suffer during the night from pain and difficulty of breathing. In the morning, as there was no improvement in his symptoms,

the attending physician performed tracheotomy and put in a tube. The breathing improved, but an attempt being made to dispense with the canula, dyspnœa immediately followed and the tube had to be replaced. The boy was then sent to London, when, upon laryngoscopic examination, a small toy locomotive was found firmly wedged in his larynx, and was partly covered by a web which held it firmly in position. It was found impossible to remove the foreign body through the natural passages, and the wound which had been made for the previous tracheotomy was therefore enlarged through the cricoid cartilage, crico-thyroid membrane and thyroid cartilage, when the locomotive came into view and was easily extracted. The patient left the hospital with a good voice. It is worthy of remark that in this case the toy locomotive was not suspected until detected by laryngoscopic examination, when the boy admitted having had such a toy in his mouth four months before.

A case has recently been recorded by Dr. D. B. Crawley, of Mississippi, in which a cockle-bur recognizable by digital exploration was extracted from the larynx of a negro aged 9, by the ingenious method of twisting cotton on the end of the index finger and rotating it in the larynx over the bur in such a manner as to fasten the prickles to the cotton. Dr. Thompson did not mention this case in his list, although he (Dr. M.) had just been told that the same expedient was unsuccessfully tried on the boy. Dr. Thorner succeeded in extracting an impacted cockle-bur from the larynx of a boy of 15 by means of a sponge instrument guided by a laryngoscope.

During the past ten years he (Dr. H.) had extracted numerous foreign bodies from the larynx through the natural passages, the most curious of them being

A PIN WHICH HAD REMAINED IN THE LARYNX THREE WEEKS.

The patient was a woman, aged 30, referred to him a year since, by Dr. J. W. Bayne. She stated that whilst holding a number of pins in her mouth three weeks before that one had been swallowed. Since that time her sufferings had been very great, and there was almost complete inability to swallow food or to talk above a whisper. The larynx on the right side, externally, was much swollen, and the patient in a nervous and debilitated condition. Various unsuccessful attempts had been made in Maryland, from whence the patient came, to extract the pin, when, upon her arrival in Washington, she was immediately sent to him by Dr. Bayne. Repeated laryngoscopic examinations under cocaine anæsthesia revealed the presence of a pin which transfixed the right ary-epiglottic fold, the point of the pin looking inwards and downwards towards the left vocal band, its head being in the upper portion of the fossa pyriformis, from whence, after many trials, it was ultimately withdrawn by means of Mackenzie's antero posterior forceps. The pin was greatly rusted, and is herewith presented to you for inspection. This patient made a rapid recovery, although there was laceration and swelling of the lower pharynx and interior of the larynx.

Regarding digital exploration of the larynx and its easy performance, to which Dr. Thompson has called attention, he would say that it is of great value and readily accomplished, especially in children. The finger is a valuable aid in practicing O'Dwyer's method of intubating the larynx, and enables us to prevent the tube from slipping out of the larynx whilst we are withdrawing the safety string. Dr. Morgan had intubated one child 22 months old for laryngeal diphtheria early in December last, a brief allusion to which was published in the *Maryland Medical Journal*, December 25, 1886. This child died about 18 hours after intubation, and this is perhaps the reason the Society has not heard more of this his first, and unsuccessful, case of laryngeal tubage.

DR. J. FORD THOMPSON had intentionally excluded the removal of everything but cockle-bur. There are numerous cases of foreign bodies having been removed from the larynx. Ashurst goes over the whole subject in his last work. In this case he had passed a large catheter and a large pair of forceps upwards through the tracheal wound, but the finger proved more effective. This use of the finger is the most interesting feature, and he has not been able to find a similar case reported.

(*To be concluded.*)

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, Friday, April 15, 1887.

THE PRESIDENT, CHAS. WARRINGTON EARLE, M.D., IN THE CHAIR.

DR. H. T. BYFORD presented the

ROUND LIGAMENTS FROM A CASE OF ALEXANDER'S OPERATION.

I have here a specimen of the round ligaments, removed by the Alexander operation only a few hours ago. They are interesting on account of the extreme attenuation, which may account for some cases of failure in this operation. They are almost as thin as wrapping cords, and will give quite an idea of what some of these ligaments are after they are stripped of their fibrous coat and drawn out. In one operation which I performed there was just such a condition, and after a long careful attempt to make them run, I broke one of them and almost lost it. The other one I could not get entirely loose, and only shortened it three-quarters of an inch. I met with one ligament twice the normal diameter, or over four times the diameter of this one; the opposite ligament in that case was about as thin as this one. I have performed Alexander's operation six times.

DR. C. W. EARLE exhibited a

CYSTIC SARCOMA OF RIGHT OVARY.

DR. CHRISTIAN FENGER exhibited a

PROLIFERATING CYSTOMA WITH PARTIAL INTRALIGAMENTOUS DEVELOPMENT.

In addition to my remarks on parovarian cysts, at a former meeting of this society, I wish to present a

specimen of a proliferating cystoma with partial intraligamentous or retroperitoneal development. It was taken from a woman, 48 years old, operated upon March 22, 1887, in the Emergency Hospital. The tumor was of enormous size. The abdomen measured at the umbilicus 132 cm. in circumference, and from the xiphoid process to the symphysis pubis 63 cm. When, after tapping, the cyst was partially brought out of the wound, I found a very peculiar formation attached to the side of the cyst near the abdominal end of the enlarged Fallopian tube. As will be seen in the specimen passed around, it consists of a long, narrow cylindrical sac, 21 cm. long and 4 cm. in diameter. Its wall is almost transparent and half filled with a clear fluid. I have not been able to find described anywhere in the literature a similar appendix to any ovarian cyst. It seems to me likely to be a reopened and dilated Morgagnian hydatid, the remnant of the terminal portion of Müller's duct. The retroperitoneal portion of the cystoma was enucleated as usual, leaving the large wound cavity with insufficient peritoneal covering. In this cavity Miculicz's drain was used with a glass tube through its center. The last of the drain was removed on the eighteenth day, and the wound finally closed shortly afterward.

Dr. W. H. Byford: I suppose there are very few instances of parovarian tumors in which they become pedunculated. We do infrequently meet with instances where there is a fair pedicle, but they are exceptions to the rule, which is that they rise from within the broad ligament, and often carry up with them a layer of fibrous tissue. And instead of being pedunculated, they commonly lie in a cup-shaped excavation in the broad ligament, extending down into the ligament some distance. There is therefore generally no way of getting rid of them except by enucleation. As was stated by Dr. Fenger at our last meeting, the general subject of enucleation was probably taught to Americans at least, by Dr. Miner, of Buffalo. But at the time Dr. Miner wrote upon the subject we did not possess the same knowledge of the difference between broad ligament tumors and ovarian tumors that we now have. At that time we frequently confounded ovarian tumors with tumors of the broad ligament, and Dr. Miner did not confine himself to the consideration of this sort of tumor, but believed he was always enucleating a cystoma of the ovary when he removed a cyst from the abdominal cavity. We are now disposed to believe that most, if not all his cases (he did not enucleate many) belonged to the variety of parovarian cysts. It is with the view of pointing out a few things in connection with the enucleation that I am now speaking. In practicing enucleation, as we have done heretofore, we make every effort, without much method, to get rid of the fibrous covering by tearing it off, without any special reference to the exact manner in which it is done.

I have met with a few of these tumors in the last three or four years, which has caused me to think differently on this subject, and made me to look more narrowly into the matter of enucleating them. About four years ago I was called upon to operate in a case of this kind, in which there was considerable inflammation as well as a very thick coat of fibrous substance brought up with the upper layer of the broad ligament, enveloping the lower third of the tumor quite closely. In operating I found that by careful manipulation I could get out the cyst proper from the capsule without tearing down the side of it. The manipulation consisted in pushing the fingers down deep between the capsule and the cyst until they went below the tumor on all sides and in the centre, when I found that I could get the sac entirely out, and in that instance succeeded in removing it without at all tearing down the sides of the enveloping capsule. I could then bring the edges of this cup-shaped stump to the external wound and stitch them to it. By means of a drainage tube in this cavity passing through the external wound, I was able to drain of the fluid, while the whole raw surface of the hollow stump was excluded from the peritoneal cavity. I have done that operation myself now three times, and have seen it performed twice. Two weeks ago last Sunday I saw an operation at the Woman's Hospital, performed by Dr. Henry T. Byford, for removal of one of these broad ligament tumors. After emptying the sac with the trocar, so that it was relaxed, he lifted it up as high as he could with Nélaton's forceps, then took the knife and lightly cut through the fibrous covering until he could get his fingers through it, when it was enucleated as above described. The inside of the cup-shaped pedicle or stump was entirely excluded from the peritoneal cavity, its edges were brought up to and included in the external wound, and then a drainage tube introduced. This method of operating is always satisfactory, as, by making a perfectly close cup, the sides do not permit of the blood or serum getting into the peritoneal cavity. In two cases we found that no discharge came through the tube, hence it is probably not always necessary to drain. A remarkable thing in connection with the operations is that there is very little bleeding. In Dr. H. T. Byford's case the patient is convalescent, almost ready to go home; she lost less than 4 ounces of blood in the whole operation. There was no ligature placed upon any of the vessels.

Dr. Fenger spoke of the operation being somewhat dangerous on account of the intestines. In this case the cæcum and the vermiform process were plainly visible upon the side of the tumor, but the fingers hulled out the capsule upon which they lay and left them perfectly free. I am convinced that these tumors can be cured as a general rule much more easily than by enucleation. I have not tried the process upon large tumors, but in small ones I make an incision through the abdominal walls, evacuate the tumor and leave a drainage tube in the sac. In four instances I have seen them cured in this way. These cysts are so simple in structure and have so little vitality that it is only necessary to drain them. Even tapping or aspirating them is sometimes sufficient. No dangers have arisen during the convalescence, and I am in hopes that the treatment of parovarian tumors on further experience will be very much simplified. I fully be-

lieve that evacuation and drainage of large parovarian cysts would be quite as successful as in the smaller ones.

A NEW COLPOPLASTIC OPERATION FOR DEFECT OF THE VAGINA.

When I saw the patient the external genitals were normal, and immediately inside of the labia minora there was a cicatricial mass, funnel-shaped, and in the centre of it an opening through which only a very fine probe would pass. Examination of the rectum showed, about 3 inches inside of the external genitals, a tumor which I believed was the uterus, but when I came to operate I found it to be a sac filled with blood and mucus—a sac the size of a hen's-egg, and behind that a small uterus. This dilated sac was at the upper portion of the vagina, and the lower 2½ to 3 inches of the vagina was a cicatricial mass. I made the usual operation recommended under these circumstances; dilatation with partial excision of the cicatricial tissue; dilatation with blunt instruments between the rectum and bladder. In that way we can get a vagina of any size without much trouble, a space large enough for a child to pass through, but we know that it is very difficult to keep such an artificial vagina from retracting. In this case, as soon as the glass plug was left out for a few days, the vagina retracted so as to barely permit the passage of the finger. It is natural that here, as in other places of the body, we should want a covering of skin and mucous membrane to keep such a channel open.

Heppner, of St. Petersburgh, in 1872, proposed to operate for absence of the vagina, at the same time dislodging the menstrual blood accumulated, then planting in a flap from the peritoneum. The posterior lines of the H were prolonged so as to loosen the flap sufficiently to put it some distance into the artificial vagina. Credé, in 1883, had evidently not seen this article. Nobody seems to have imitated or adopted this method, because Credé describes a method of operating in an obstinate case that had been operated upon over and over again with usual dilatation method, and in which the vagina always retracted so as to cause the patient great inconvenience in her menstruation. He operated by dilating the vagina as usual; then he took a flap consisting of one labium majus, leaving the labia minora, and planted that in the posterior surface of this new vagina. He states that the hairs on this labium majus did not cause any inconvenience. It was an elderly lady, over 50 years of age, where marriage was out of the question; she only wanted relief from her menstrual troubles. In this case I thought it would be better to use the labium minora for a flap on each side, the labium minus, when reasonably well developed, being capable of folding and unfolding, and consequently the flap acquires the diameter of such labia minora. By unfolding them we get one inch more. By loosening the labia minora on the sides, leaving them in connection with the skin at the posterior side of the entrance to the vagina, and then unfolding them, I get a flap 3 inches long and an inch in diameter, although this labium minus looked very thin, almost transparent, so that I thought it would die off when planted in. It did not have the advantage of being mucous membrane, but was without hairs. The result was that both of the flaps healed. I have the patient here, so that the Fellows of the Society can see that the vagina is almost perfect. The loss of substance caused by taking the flap is very easily covered by drawing together all the skin. It is very movable, so that there is really no loss of substance. A flap of skin 1½ inch broad is very easily covered by drawing the neighboring skin together. So far as after-treatment is concerned, there has been no difficulty. In the beginning the vagina was packed with iodoform gauze, and later glass plugs were introduced.

ANTISEPSIS IN ABDOMINAL OPERATIONS; SYNOPSIS OF A SERIES OF BACTERIOLOGICAL STUDIES.

(Preliminary Note, by Christian Fenger and Bayard Holmes.)

Synopsis of a Series of Bacteriological Studies.—These investigations were undertaken to determine how far the necessary aseptic conditions had been secured and maintained in the abdominal sections performed by Dr. Christian Fenger. One case of another operator is brought in to compare less thorough antiseptic precautions.

In order to estimate the results of these researches, you must know what preparations were made for the operation on the part of each concerned.

The Preparation of the Operating-Room.—In the Emergency Hospital and in the County Hospital, the walls and the floor and all the furniture were thoroughly washed with a 1–1,000 sublimate solution on the day before the operation. The cracks about the windows and doors were stuffed with cotton, and the room closed to every one except the nurse that made the preparations.

To test the condition of the atmosphere in this room, in the Emergency Hospital, four plates of gelatin were exposed for 48 hours on the operating table, August 24 and 25, 1886. After six days' incubation in the moist chamber, from eight to twelve colonies of all kinds appeared on each square inch of surface. Most of these were moulds, which grew very rapidly; some were micrococci and some bacilli. As less than twelve colonies developed to the square inch, it is probable if the plates were exposed only an hour instead of 48 hours, not more than one colony would be found on each four square inches. So that the danger of atmospheric infection from falling germs would be very slight under similar conditions. The danger would be, no doubt, increased by the movements of the assistants, and the increased circulation of air through the difference in temperature of the external and internal atmosphere when the room was in use.

The Preparations of the Operator and Assistants.—Each took a sublimate bath (1-2000) and put on sterilized cotton suits. The hands and arms were then washed 5 minutes with warm water and green soap, and scrubbed with a brush, and then washed half a minute in a 1-1000 sublimate solution. The patient received substantially the same treatment.

(To be continued.)

FOREIGN CORRESPONDENCE

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Inveterate Neuralgia—Apothecaries and Medicine—Phenol-Mercury.

Mr. Victor Horsley has recently drawn attention to some cases of *Inveterate Neuralgia* which have been under treatment by him. He gave a short history of three cases of this distressing malady which he had treated with apparent success by avulsion of the fifth nerve. All three of his cases had come under his observation at a very late stage of the affection, the shortest period being three years and a half after the outset of the mischief, and in one case as much as seven years after. All were practically edentulous when they came to him, and from all of them after the operation he had the same story, namely, gratification at being relieved from pain, and regret at the loss of so many sound and useful teeth. Were there no indications by which it was possible to diagnose pain which was due to mischief somewhere along the trunk of the nerve from that which was due to disease of the teeth? If this could only be done with certainty it would mark an important advance in dealing with these often terrible cases of long suffering. Pain referred to one of the branches of the fifth nerve might be due to mischief of cerebral origin, to irritation along the trunk of the nerve, or at its peripheral extremity. He did not dwell on the possibility of the pain being due to intra-cranial mischief, since the general rules applicable to this class of cases would generally suffice for the discovery of the seat of trouble. The diagnosis between some affections of the trunk of the nerve and of its peripheral termination was not so easy, but judging from his own experience, he thought there were two points which might assist in forming a decision. A very valuable indication of mischief in the trunk of the nerve, were trophic changes when present. Thus in one of his cases, the lower lip was greatly swollen, the skin being glazed and excessively sensitive, or the vessels might be at one time dilated and at another just the opposite. Wasting of the muscles was another evidence of the same kind. Certain abnormal conditions of sensation were also valuable. In an ordinary case of toothache all the branches of the fifth nerve might seem to be affected but in cases where the disease was in the trunk of the nerve, the skin might be hyperæsthetic at one place and anæsthetic at another.

Another characteristic form of hyperæsthesia was that in which gently touching the skin caused extreme pain, whilst firm pressure caused no pain at all. As to the apparent origin of the pain, he found that in most cases the patient said it began in the teeth, but in some cases it was said to begin in the bone and in the skin. If the pain was referred primarily to the teeth, it might be due to them, or it might not, but if it began in the bone or skin and only affected the teeth subsequently, he thought it might be inferred that the disease was in the trunk of the nerve. If, again, in addition to severe pain over the area of distribution of the nerve, distinctly tender spots were met with along the course of its branches, this was generally an indication that the whole nerve was in a state of irritation, but a somewhat similar condition sometimes might be met with as a result of peripheral irritation. If the pain was brought on more commonly by movement, this seemed to indicate affection of the nerve trunk. All his cases stated that opening the jaw to eat or talk brought on pain, and so far as he was aware, the effect of movement in causing pain was not so marked in cases where this loss was due to peripheral irritation. With regard to treatment, any cases of dental irritation should be removed, and in some this would effect a cure. Drugs invariably failed sooner or later. Nerve stretching should not be performed on the fifth, for although it gave relief for a time, the pain invariably recurred. Avulsion, performed close to the aperture of exit from the skull as possible, generally cured, the success of the operation seeming to depend greatly on success in obtaining primary union, and the removal of the nerve was not followed by any trophic changes in the parts supplied by it.

At a recent meeting of the General Medical Council, in which the right and wishes of the Apothecaries' Society was under discussion, Sir William Gull contended that it was not desirable to have a Society of Apothecaries at all, and that its existence was contrary to the interests of medicine. People he said did not get well by drugs. When the Prince of Wales was ill of typhoid fever, how many doses of medicine did he take? Not four. The question was, whether the profession should be set free from the trammels of the past. Medicine was once given even for fractures. It was the powers of nature that effected the cure of disease, and the duty of the medical men was not to give drugs, but to see that nature's powers were not interfered with.

Since the time of Paracelsus, when the antiseptic properties of mercury first came to light, mercurial preparations have been more or less in vogue throughout the world. A new compound of this description, which may possibly attract a good deal of attention, is called phenol-mercury. It is produced by mixing an aqueous solution of 132 parts of phenol-potassium with a solution of 271 parts of mercuric chloride, when a reddish orange precipitate is thrown down. This is washed on a filter until the filtrate no longer gives a reddish color on the addition of iodide of potassium. In drying the product its color becomes brighter and the dry powder retains only a slight odor of carbolic acid. Phenol-mercury is given in pills containing 0.02 grams, of which the dose is 2 a day at first, gradually increased six daily.

G. O. M.

DOMESTIC CORRESPONDENCE

HEART WOUNDS.

Dear Sir:—Believing with Dr. Arthur Young, who writes for THE JOURNAL of Sept. 13 concerning the "Burton Case," that cumulative testimony is of more importance than speculation as to the capacity for

action after heart wounds, I beg leave to submit the following facts in an accidental killing: The fifteen years old son of H. Bruaw, of this place, was found dead near the railroad track on the afternoon of Aug. 9, 1886. It was at first supposed he had been killed by the cars, but on removal to the house and stripping, a hole of considerable size was found about midway between the left nipple and sternum. It was then supposed he had been shot, and a vicious neighbor boy who had threatened the family was arrested. On arrival of the coroner, and with the assistance of Dr. Wm. Thompson, I made an examination. We found the missile (the character of which was unknown) had fractured two ribs in passing in; and on enlarging the opening and introducing my hand, I found a corresponding opening in the pericardium which was full of blood, and a stellate laceration in the front wall of the left ventricle, through which I extracted from the cavity of the ventricle a crumpled piece of tin ¾x½ inch in size. This cleared up the mystery. Subsequent investigation showed that the boy had found an open package of signal torpedoes, used to stop trains at night and at other times, left there by track repairers, and near by some bolts and an old rail which they had removed. Stooping down he had laid a torpedo on the rail and striking it with the bolt-head, it had exploded, driving the piece of tin into his heart. He must have then risen to his feet and run or walked in the direction of his home at least thirty steps, crossing to the opposite side of the track before he fell on his face, dead. Dr. Young's case was a knife incision, which would not have emptied the ventricle as promptly as this torn opening. Might it not be possible, then, that a would-be suicide could shoot himself through the heart, then, uncertain of the result, make the second attempt? or in other words, ignoring the direction of the shot in the "Burton Case," would not other evidence than that the first shot was through the heart be needed to determine between homicide and suicide?

HERBERT C. JONES, M.D.

Cerro Gordo, Ill., Sept. 21, 1887.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Summer Charitable Work for Poor Children—Meeting of the American Gynæcological Society—College of Physicians and Surgeons in the New Buildings and Preliminary Requirements—Death of Dr. Alonzo Clark.

The various charitable societies have now brought their summer work among the children of the poor to a close. During the season just ended the St. John's Guild have received some $12,000 for the support of the free excursions of its floating hospital, and as the total expense of a single excursion, including food for the mothers and children, does not exceed $250, it will be seen that the Guild has been enabled to accomplish much good during the heated term. Dr. Moreau Morris, Chief Sanitary Inspector, who has had the direction of the summer corps of physicians of the Board of Health this year, has written a letter to Mr. Faure, Secretary of the Guild, in which he extols the results obtained in the restoration to health and saving of life among sick children by the trips upon the floating hospital. One has but to visit the barge, he says, to become convinced of the value of these excursions; and the gathering of nearly a thousand enfeebled children strikingly reveals the sufferings of the little ones caused by the close and unwholesome atmosphere of the tenement houses where they live and their improper and insufficient food. There is no danger of contagion on the trips, as every child is subjected to a rigid scrutiny by the examining physicians before it is allowed upon the boat. The absence of all sectarianism, as regards creed or race, in the dispensation of this charity, Dr. Morris continues, commends it to all classes; and in the caring for these afflicted children by the summer corps, supplemented by these fresh air excursions and liberal and judicious feeding, no nobler application of Christian charity could be desired. As an illustration of the great good resulting from the excursions he refers to an instance which came under his observation on the occasion of an official visit to the floating hospital in the early part of August, in which an infant was carried on board almost moribund, to return from the invigorating trip down the Bay with a new lease of life. During the past season the St. John's Guild has added to its charitable work a useful feature in giving some special free excursions for "debilitated, feeble, and worn-out convalescent adults."

The Summer Home at Bath and the Health Home on Coney Island of the Children's Aid Society were closed for the season on the 10th of September. At the former 4,436 poor children from the tenement districts of the city were received, and of these over 3,000 little girls spent a week; while at the latter 4,602 mothers and sick infants had the benefit of the day excursions, and 753 mothers, with 1,448 children, remained for a week. The total number at both homes was 11,239.

The twelfth annual meeting of the American Gynæcological Society, which was held at the hall of the New York Academy of Medicine September 13, 14 and 15, was marked by the attendance of a number of distinguished foreigners who had come from the International Medical Congress at Washington, and among these were Drs. Grailey Hewitt and George Granville Bantock, of London, A. R. Simpson, of Edinburgh, August Martin, of Berlin, A. Cowles, of Genoa, and G. Apostoli and A. Doléris, of Paris. On the evening preceding the meeting Dr. Paul F. Mundé entertained these gentlemen, with a number of American guests, at an elaborate dinner at the Union League Club, and after the adjournment on the third day the Society had its annual dinner at Delmonico's; while on Tuesday evening, September 13, Dr. Fordyce Barker gave a handsome reception at his residence to the American Gynæcological Society, its distinguished foreign guests, the Obstetrical Society of New York, and the members of the Obstetric Section of the New York Academy of Medicine.

On the 2d of October the College of Physicians

and Surgeons will commence its first session in the magnificent new buildings provided by the liberality of the late Mr. Wm. H. Vanderbilt and his family, and the announcement is made that while no preliminary examinations will be required for the session of 1887–8, for the session of 1888–9, and thereafter, applicants for matriculation will for the first time at this College be required to undergo examinations for the admission, with the exception of those, 1, who shall declare themselves not to be candidates for the degree of M.D. from the College; 2, who shall present certificates of having been successful at examinations for admission to the School of Arts or School of Mines of Columbia College, of which the College of Physicians and Surgeons is the medical department; 3, who shall present diplomas or certificates of graduation in arts, philosophy, science, or medicine, from recognized colleges and schools of science; 4, who shall present certificates from recognized colleges or schools of science, to the effect that they have studied satisfactorily any or all of the subjects required for admission to the College, in which case they will be admitted without examination in the subjects so certified to. The examinations for admission are to be in writing, and will include English composition, sufficient Latin for the translation and parsing of Cæsar or Sallust, algebra, as far as simple equations, and the first book of Wentworth's Geometry, or its equivalent. The examinations are to be held semi-annually, and an applicant rejected or conditioned in any branch or branches will be eligible for reëxamination at any subsequent semi-annual examination.

In the death of Dr. Alonzo Clark New York medicine loses one of its most illustrious exponents, although the State of the venerable professor's health has for some time past necessitated his complete retirement from professional work. Dr. Clark felt a deep interest in the "Code question" which agitated the profession here a few years ago, and was in hearty sympathy with the movement which resulted in the organization of the now powerful and prosperous State Association; but his enfeebled condition prevented him from taking any active part in the struggle.

P. B. P.

NECROLOGY.

WILLIAM H. THORNDIKE, M.D.

William H. Thorndike, M.D., born at Salem, Mass., died at Boston, Dec. 26, 1884, aged 60. His death has left a large void in the medical profession of Boston, exemplified so well for thirty-five years the life of a good physician that it is difficult to do his character justice in an obituary notice. Modest in bearing, Saxon in speech, reticent of many words, his calm judgment, clear perception, and entire honesty commended him to the confidence alike of friends and patients. He was the type of unselfish devotion to his calling. He pursued medicine as a profession, and not as a trade. Too careless, perhaps, of pecuniary returns, he lived in his cases, gave himself wholly to his sick, and was death-struck while attending a professional call. He was an active and valued member of the various medical organizations, including that of the American Medical Association since 1865.

Beginning to practice in a somewhat isolated community at East Boston, he early learned to rely wholly on himself, and never hesitated to undertake anything he was called on to do. Thus was developed a peculiar roundness and completeness of character usually found only in a country doctor. To this he added the wide experience and versatility generated in great cities, and both were concentrated and widened by seventeen years' service as surgeon of a great hospital. All departments of medicine and surgery, many of which are now confined to specialists, he practiced without hesitation and with success.

He belonged to the older school of surgeons. Natural taste, acquired dexterity, and long practice, had made a deft, intrepid and successful operator. He loved his art. With him to see clear was to do. Diagnosis was followed by action. Expectation in surgery he well recognized as of less value than in medicine. For twenty years, both in private practice and in the hospital, he did an enormous number of operations, surgical gynecological, obstetrical, ophthalmic. An enumeration would be tedious, and we will allude only to the unusual ones. He tied the internal iliac artery, behind the peritoneum, for secondary hæmorrhage from a perforating wound, and the patient lived to attend the funeral of his surgeon. He tied the external iliac vein for primary hæmorrhage from a stab with success. He tied the gluteal artery at its emergence from the sciatic notch for a traumatic aneurism in the nates. In this he boldly performed the operation described by Bell, who so graphically describes the rush of blood and clots and the difficulty of seizing the vessel. He removed a cobble-stone, 5 inches by 3, and weighing 2 pounds, from the peritoneal cavity with success. In this remarkable case the patient had inserted the stone into his rectum, thence it had ulcerated through the rectum and colon into to the peritoneum. Dr. Thorndike passed his hand into the rectum, but the stone escaped beyond his reach. He then opened the peritoneal cavity by an incision 5 inches long, parallel to the rectus muscle, and removed the stone. The patient recovered. He opened the gall-bladder, and removed calculi by incision.

Among the surgical feats he prized the most were two operations for evacuating pus from a retro-peritoneal abscess near the cæcum. The symptoms in the first case were constitutional more than local, but very intense. He made the incision to tie the iliac artery, pushed back the peritoneum, found a mass of induration in the iliac fossa, plunged in a trocar, and was rewarded by evacuating pus, and the perfect recovery of his patient. Most of these operations were done before the days of antiseptic surgery. The removal of Meckel's gangloin for neuralgia, amputation at the hip-joint, many lithotomies, Cock's operation for perineal section—which he valued highly—many large tumors, might be added to this list. He also

had practiced every operation of modern gynecology except Battey's operation.

A large, continuous, and exacting private practice gradually wore him out; but his constitution was also sapped by a poisoned wound received three years before his death. He sank rapidly under a double pneumonia, and died in forty-three hours from the primary chill, apparently unconscious of suffering.

D. W. C.

HENRY M. SAVILLE, M.D.

Henry M. Saville, M.D., was born in Quincy, Mass., July 29, 1833. Graduated from Amherst College in 1855. He commenced the study of medicine at Dartmouth College, taking his second course at Harvard Medical College, and graduating from the University of Pennsylvania in 1857, joining the Massachusetts Medical Society in 1858, and the American Medical Association the same year. He at once commenced practicing medicine in his native town, and was eminently successful. In April, 1861, he was made surgeon of Fourth Mass. Infantry, accompanying it to Fortress Monroe; was at the battle of Big Bethel and returned home after a three months' volunteer service. He married in 1862, and moved from Quincy to Boston, where he practiced for ten years. His health failing in 1872, he was obliged to seek a warmer climate, spending one winter in Egypt, visiting California, passing several winters in Florida, with so much benefit that he again tried a Northern winter, located in New York, where he died Jan. 11, 1881, of pneumonia.

M. G. P.

LUTHER PARKS, M.D.

Luther Parks, A.M., M.D., whose death was previously announced, was born in Boston, Nov. 4, 1823, and graduated at Harvard College in 1843, taking high rank in a class which included many men who have become distinguished. Dr. Parks took his degree of M.D. in 1847, and in the same year went to Ireland as surgeon of the U. S. Sloop of War "Jamestown," which was sent, loaded with provisions, to relieve the starving Irish people. He was there made a Fellow of the Royal College of Surgeons of Ireland. After his return he married Miss Julia Dale, and established himself at the South end of Boston. In his active practice there of eleven years, during a portion of which he served as one of the District physicians of the Boston Dispensary, he was notable for conscientious fidelity and kindness toward his patients, and for his skill as an obstetrican, which he took pains to perfect, by practical work at the Rotunda Lying-in Hospital at Dublin, during a second visit to Europe in 1852. After the death of Mrs. Parks, in 1859, he again went abroad, everywhere interesting himself in what was being done in the profession.

Dr. Parks married in 1861 Miss Catharine Burroughs, and, at the request of his father who was advancing in years, he removed to Chestnut street and retired from active practice. During the late war, at the solicitation of Governor Andrew, who was a personal friend, he went to the penisular of Yorktown as a volunteer surgeon. After his father's death, Dr. Parks again went, in 1872, to Europe, residing there until his death at Pau, Nov. 19, 1886, aged 62.

Dr. Parks was for some years one of the physicians of the Boston Lying-in Hospital, and was associated with Dr. S. L. Abbot, as editor of the *Medical and Surgical Journal*. At the annual dinner of the Massachusetts Medical Society in 1871 he presided as Anniversary Chairman. As Chairman of a Committee of that Society he carefully investigated and reported upon an epidemic of cerebro-spinal meningitis in Massachusetts. He joined the American Medical Association in 1849 attending in 1855 and 1865.

M. G. P.

MISCELLANEOUS.

NEW BOOKS RECEIVED.

Transactions of Michigan State Medical Society, Twenty-Second Annual Meeting, held at Lansing, May 12 and 13, 1887.

Transactions of the Thirty-Seventh Annual Meeting of the Illinois State Medical Society, held in Chicago, May 17, 18 and 19, 1887.

Transactions of the Medical Association of the State of Missouri at the Thirtieth Annual Session, at Macon City, Mo., May 10, 1887.

Transactions Texas State Medical Association, Nineteenth Annual Session, held at Austin, April, 1887.

Massage. By Geo. H. Taylor, M.D. Published by J. B. Alden, New York.

Student's Guide to Diseases of the Eye. By Edward Nettleship, F.R.C.S. Third American and Fourth English Edition. Published by Lea Brothers & Co., Philadelphia.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 17, 1887, TO SEPTEMBER 23, 1887.

First Lieut. Julian M. Cabell, Asst. Surgeon, relieved from duty in connection with the annual Dept. Rifle Competition at Bellevue Rifle Range, Neb.; ordered for duty as medical officer at the "Rifle Camp for Team of Distinguished Marksmen," Bellevue Rifle Range. S. O. 89, Dept. Platte, September 10, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING SEPTEMBER 24, 1887.

Surgeon H. P. Harvey, ordered to the U. S. S. "Mohican."

Surgeon G. A. Cooke, detached from the "Mohican" and ordered home.

Medical Inspector C. J. Cleborne, promoted to Medical Director. September 18, 1887.

Surgeon T. C. Walton, promoted to Medical Inspector. September 18, 1887.

P. A. Surgeon J. C. Boyd, promoted to Surgeon. September 18, 1887.

Surgeon J. R. Tryon, ordered to Marine Rendezvous, N. Y. October 1, 1887.

Asst. Surgeon J. G. Field, detached from Marine Rendezvous, N. Y., and ordered to the "Vermont."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING SEPTEMBER 24, 1887.

P. A. Surgeon J. H. White, promoted and appointed P. A. Surgeon from October 1, 1887. September 19, 1887.

Asst. Surgeon W. J. Pettus, to proceed to Savannah, Ga., for temporary duty. September 20, 1887.

Asst. Surgeon H. T. Goodwin, appointed an Asst. Surgeon September 22, 1887. Assigned to temporary duty at Norfolk, Va., September 23, 1887.